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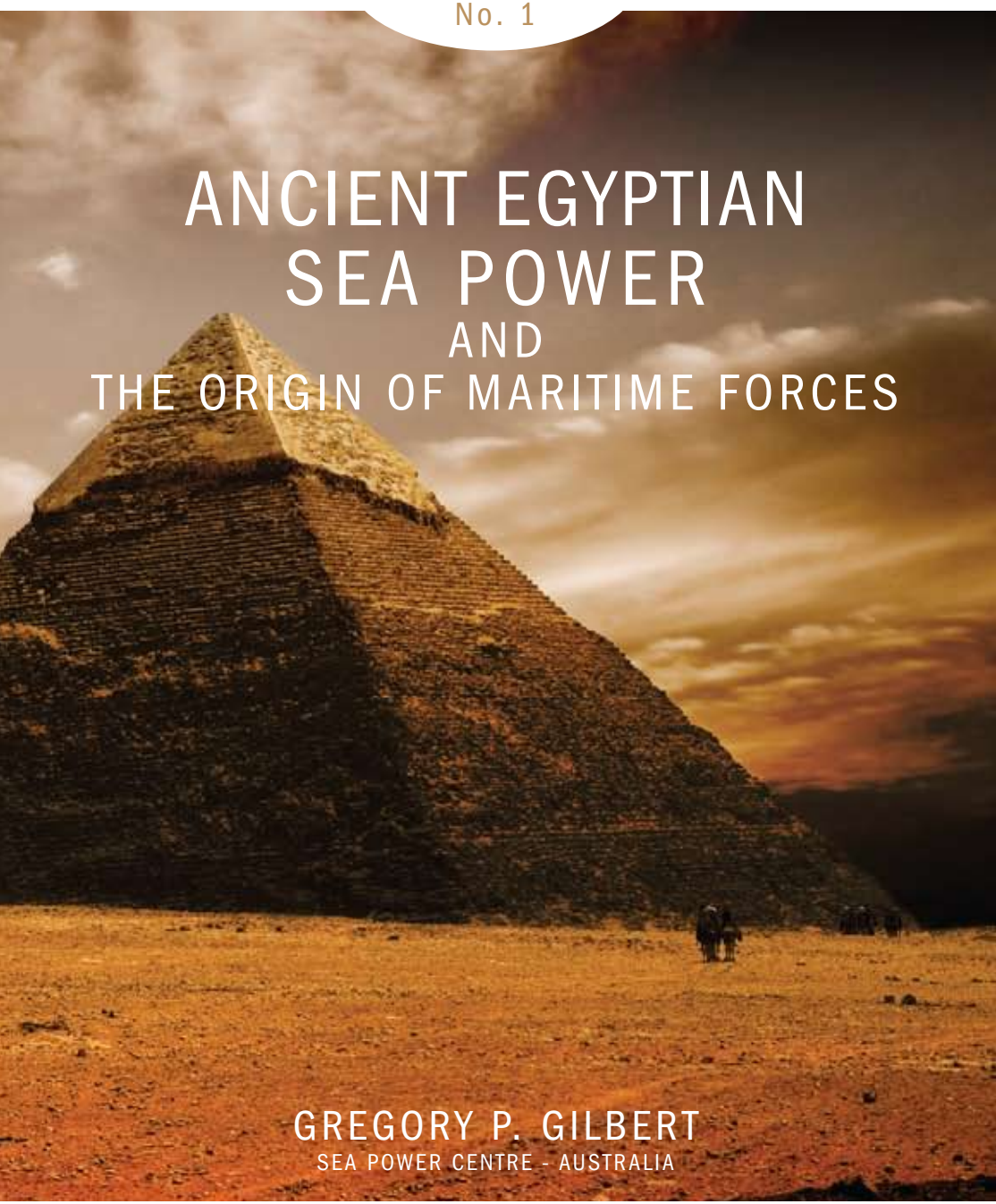

ANCIENT EGYPTIAN SEA POWER AND THE ORIGIN OF MARITIME FORCES

GREGORY P. GILBERT
SEA POWER CENTRE - AUSTRALIA

ANCIENT EGYPTIAN SEA POWER

AND THE ORIGIN OF MARITIME FORCES

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ANCIENT EGYPTIAN SEA POWER

AND THE ORIGIN OF MARITIME FORCES

by
Gregory P. Gilbert

Sea Power Centre – Australia

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The Sea Power Centre – Australia (SPC-A), was established to undertake activities to promote the study, discussion and awareness of maritime issues and strategy within the RAN and the Defence and civil communities at large. The mission of the SPC-A is:

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- to manage the development of RAN doctrine and facilitate its incorporation into ADF joint doctrine
- to contribute to regional engagement
- within the higher Defence organisation, contribute to the development of maritime strategic concepts and strategic and operational level doctrine, and facilitate informed force structure decisions
- to preserve, develop, and promote Australian naval history.

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FOUNDATIONS OF INTERNATIONAL THINKING ON SEA POWER

The *Foundations of International Thinking on Sea Power* series is a refereed publication that reflects original research, both historical and contemporary, on how various States perceive the necessity for, and the use of, seas power. The series re-examines the fundamental understanding of sea power in a variety of cultural traditions from ancient times to the present day.

Modern concepts of sea power are largely based upon the Anglo-American tradition, and subsequently many navies have had difficulty identifying and applying alternative maritime traditions. By examining the broadest aspects of maritime strategy, this series aims to highlight the assumptions that underpin our modern perceptions of sea power.

No. 1 *Ancient Egyptian Sea Power and the Origin of Maritime Forces*
by Gregory P. Gilbert

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ABBREVIATIONS AND ACRONYMS

BCE	Before the Common Era
CE	Common Era
CIA	Central Intelligence Agency
NASA	National Aeronautics and Space Agency
RAN	Royal Australian Navy
SPC-A	Sea Power Centre – Australia

ABBREVIATED SOURCES

AEL	Lichtheim, M., *Ancient Egyptian Literature, vol. I: The Old and Middle Kingdoms*, and *vol. II: The New Kingdom*, University of California Press, Berkeley, 1973 and 1976.
BAR	Breasted, J.H., *Ancient Records of Egypt*, 5 Vols, University of Chicago Press, Chicago, 1906.
PM	Porter, B., and Moss, R.L.B., *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings. VII. Nubia, Deserts and Outside Egypt*, Griffith Institute, Oxford, 1951 (reprinted 1995).
Urk I	Sethe, K., *Urkunden des ägyptischen Altertums. Abt I, Urkunden des alten Reiches*, 2nd edn, Leipzig, 1932-1933.
Urk IV	Sethe, K., *Urkunden des ägyptischen Altertums. Abt IV, Urkunden der 18. Dynastie*, Leipzig and Berlin, 1905-1958.

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Dr Gregory P. Gilbert worked within the Department of Defence (Navy) for 11 years as a naval designer, before becoming a Defence consultant. He has broad research interests including the archaeology and anthropology of warfare; Egyptology; international relations – the Middle East; maritime strategy and naval history. His excavations include Helwan, Hierakonpolis, Koptos and Sais in Egypt. He is currently furthering his naval historical interests as a Senior Research Officer in the Sea Power Centre – Australia.

PREFACE

Despite my early reservations that the extent of Ancient Egyptian sea power was already widely known, it did not take long before I realised that what I have taken for granted for some 25 years or so, was either doubted or denied by many scholars. Hopefully this book will help to educate those who believed that sea power did not exist prior to the introduction of specialist warships, and in the process it will encourage others to look deeper into the many historical experiences that may have contributed to our understanding of maritime strategy and sea power but that have tended to be overlooked in the Western intellectual tradition.

I wish to express my sincere thanks and gratitude to Captain Richard McMillan, CSC, RAN, Captain Peter Leavy, RAN, Dr David Stevens and the staff at the Sea Power Centre –Australia (SPC-A) for their encouragement and support during the planning, research and writing phases of this project. I am especially grateful to Andrea Argirides whose interest in the Ancient Mediterranean helped to reinvigorate my efforts whenever my own thought processes began to sag.

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Gregory P. Gilbert
Canberra, Australia
May 2007

FOREWORD

If one were to review the naval history courses taught in military staff colleges and at universities around the world, the impression gained would be that not much that happened at sea before World War I is relevant today. Further investigation would reveal a small but determined group of people who believe that much of the naval history of the age of sail remains useful, and indeed provides a broad perspective on the application and limitations of sea power. The study of naval history and sea power in the medieval and ancient worlds has tended to be left to a somewhat eclectic group of scholars operating on the very fringes of the naval history discipline. Much of the scholarship on sea power in the ancient world has been undertaken by classical scholars and ancient historians, whose works are rarely if ever referred to by modern naval practitioners, naval historians or students of maritime affairs.

Some might argue that there is no need to study ancient sea power or the origins of naval forces. This argument would see that modernity is without historical precedent, where we live in a new golden age that has witnessed an end to history. Such views have also led to claims that naval strategy and navies themselves are no longer relevant. The events of the early years of the 21st century have firmly relegated such thinking to the trash can of history. During the last 10 or so years, there has been a renewed interest in the application of sea power in the political, constabulary and military domains, coupled with a broadening of the roles that modern naval forces are required to undertake. Many of the activities now associated with naval forces are enduring, while other challenges for modern navies may be better understood if the historical precedents are examined. An examination of naval history in the broadest terms does provide insight into the way navies may operate and be administered today. Insight may be gained by looking beyond the naval history of the last 100 years, beyond the start of the common era (2000 years ago), to the time when the utility of boats and ships was first understood and used by the leaders of early states to meet their political, constabulary and military ends.

It is a truism that Egyptologists and naval historians do not often mix. Egyptologists study the art, archaeology and history of Ancient Egypt. They often tend to believe in Ancient Egypt as a specialisation that is significantly different from other regions of study, that many of the philosophical developments within the art, archaeology and history disciplines are commonly ignored, being classified as ‘not relevant to Ancient Egypt’. The upshot of this is that much of the detailed information on Ancient Egypt tends to remain in the hands of the Egyptologists, while public demand for all things ‘Egyptian’ has generated large numbers of popular books of varying quality, which by

their very nature do not contain the detailed information that support new discourses on Ancient Egyptian history. This study aims to bring the relevant information on Ancient Egyptian sea power together in a form that historians and naval professionals should find interesting and informative. It is both a source book and a vehicle for new models and interpretations for the origins of naval forces. It is hoped that in time naval practitioners, naval historians and students of maritime affairs will appreciate the full tapestry of Ancient Egyptian sea power. In future, Egyptologists, ancient historians or the interested public may wish to make their own contribution to the better understanding and the continued relevance of Ancient Egyptian sea power.

This study is the first step in a process that is intended to bring international thinking on sea power to the fore. As such, the research is intended as a preliminary study of the most readily available sources. It is not intended to be a comprehensive collection of all references to Ancient Egyptian maritime activities, but rather the more obscure sources have been put aside in favour of those that support the sea power message. The resulting narrative interpretation is thus also evolving, and all constructive feedback is most welcome. This study is somewhat like looking at a long coastline through binoculars, while one may focus on one small landing place ashore, it should not be inferred that the rest of the coastline does not exist. Sea power was just one aspect within the multifaceted society that was Ancient Egypt.

Mediterranean Sea
ALEXANDRIA
SAIS
LOWER EGYPT
HELIOPOLIS
CAIRO
GIZA
MEMPHIS
Egyptian Nile
Sinai
UPPER EGYPT
TELL EL AMARNA
ABYDOS
KARNAK
VALLEY OF THE KINGS
THEBES
LUXOR
Red Sea
EDFU
ASWAN
First Cataract
NUBIA
Nubian Nile
ABU SIMBEL
Second Cataract

CHAPTER 1 — INTRODUCTION

When the Nile covers the land, only the towns are visible above the water, and they look like nothing so much as the Aegean islands. The rest of Egypt becomes open sea, with only the towns rising up out of it. [1]

Herodotus II.97

Egypt: the Gift of the Nile

Today, many high school students are introduced to Ancient Egypt during their studies. Many more people have followed with wonder new and exciting archaeological discoveries that have bombarded people's television screens. So it is likely that there are many readers of this study who would have a basic knowledge of Ancient Egypt.[2] For the purposes of this study, it will be sufficient to highlight the relevant parts of Egypt's geography, its socio-political structure and its chronology.

The Egyptian Delta and the Eastern Mediterranean

The Ancient Greek historian Herodotus called Egypt 'the gift of the Nile'. The Nile River carves a path northwards from Central Africa, through the deserts that make up the greater land mass of modern Egypt, until it finally disgorges into the Mediterranean Sea. Before the completion of the Aswan High Dam in 1970, the summer rains of Central Africa would cause an annual inundation of the Nile, which receded to reveal the fertile black soil of the Egyptian Nile Valley and its Delta. This fertile black land was where most Ancient Egyptians lived, worked and died. The neighbouring desert, the red land, was alien to the Egyptians; it was a place where they buried their dead, and fit only for Bedouin nomads. During the Nile inundation, the towns of Egypt became islands scattered throughout the Upper Egyptian Valley and the Lower Egyptian Delta. This book helps to reveal that Ancient Egypt was not just a riverine culture, but that it was a maritime nation.[3]

The Egyptian Nile operates as a natural communications link between the cities, towns and villages of Egypt, and as a conduit for communications between the regions bordering the Upper Nile, the Mediterranean Sea and the Red Sea. Goods, people

and ideas from Nubia, the Sudan and even Central Africa, entered Egypt from the south along the Nubian Nile. After negotiating the First Cataract[4] at Aswan, ships could travel almost anywhere along the Egyptian Nile.

To the north, ships travelled downstream, along one of the then seven branches of the Nile, into the Eastern Mediterranean.[5] The Eastern Mediterranean was also a natural communications link between the major cultural centres of Syria-Palestine, Cyprus, Crete, Greece and Libya. A third communications link travelled parallel to the Nile south along the Red Sea. This route included a short trip to the Sinai Peninsular, and also led to the ancient region of Punt, located somewhere near the horn of Africa.[6] The Red Sea route grew into one of the main trade routes to the Persian Gulf, South Asia and beyond. As it was not possible to navigate directly from the Egyptian Nile to the Red Sea, some means of overland transportation was required, mostly over the Wadi Tumulat in Lower Egypt, or the Wadi Hammamat in Upper Egypt. Ships were dismantled for transportation by donkey and then reassembled on the Red Sea coast before continuing their journey along the Red Sea. These sea lines of communication helped to blend Egyptian civilisation into a cultural mixture of Middle Eastern and African influences.

Prehistoric Period (before 3050 BCE)
Egyptian Epipaleolithic (c.8000-5500 BCE)
Egyptian Neolithic (c.5500-3700 BCE)
Egyptian Predynastic (c.3700-3050 BCE)
Early Dynastic Period (c.3050-2686 BCE)
1st and 2nd Dynasties. Early State.
Old Kingdom (2686-2160 BCE)
3rd to 8th Dynasties. The Pyramid Age.
First Intermediate Period (2160-2055 BCE)
9th, 10th and early 11th Dynasties.
Middle Kingdom (2055-1650 BCE)
11th to 14th Dynasties.
Second Intermediate Period (1650-1550 BCE)
15th to 17th Dynasties. Including the Hyksos and Theban kings.
New Kingdom (1550-1069 BCE)
18th Dynasty. (1550-1295 BCE)
19th Dynasty. (1295-1186 BCE) Ramessid Period
20th Dynasty. (1186-1069 BCE) Ramessid Period
Third Intermediate Period (1069-664 BCE)
21st to 25th Dynasties.
Late Period (664-332 BCE)
Ptolemaic (Greek) Period (332-30 BCE)
Roman Period (30 BCE-CE 395)
Islamic Period (CE 395-1517)
Ottoman Period (CE 1517-1805)
Khedival Period (CE 1805-1919)
Monarchy (CE 1919-1953)
Republic (CE 1953-present)

Table 1: The Chronology of Egypt [8]

Much of the evidence considered within this study comes from between 3050 and 1069 BCE, a time that is often labelled the 'Pharaonic Period'. It is so termed because it was a time when there was a strong hierarchical social structure in Egypt, with the king or Pharaoh at the peak of the population pyramid, supported by a small group of princes, senior officials and other elites (approximately less than 1 per cent of the population); above lesser officials and artisans of all kinds (less than 5 per cent); and supported

by a mass of peasants (roughly about 95 per cent).[7] The Pharaoh was the pinnacle of centralised government within the early Egyptian state. State officials administered the central government affairs while the small farmers were taxed to support the officials and the king. When the system worked well, the Pharaoh was able to redistribute wealth to support expeditions against Egypt's enemies, and to create major monuments of state propaganda, such as the pyramids or the temples at Luxor. Such periods of strong centralised government have been labelled by modern scholars as the Old, Middle and New Kingdoms. However, efficient centralised government did not always work well, and scholars now refer to the times between the three kingdoms, the earliest 'Dark Ages', as the First, Second and Third Intermediate Periods. A more detailed chronology for Ancient Egypt is listed in Table 1.

Why Study Ancient Egypt?

If the wealth of material that has been written on sea power is considered,[9] one may legitimately ask why one needs to consider the Ancient Egyptian experience? First, Ancient Egypt was one of the pristine archaic states, a state that arose from internal factors with little influences from other states; hence it provides an opportunity to examine the evidence for sea power within a society that is less complex than its modern equivalents. Second, although many people in the West may feel they have some affinity for Ancient Egyptian culture, it is essentially non-Western. Much of the early thinking about sea power in Egypt was undertaken quite independently of the later Greek and Roman philosophers who contributed most to the foundations of what is now Western culture.[10] Ancient Egyptian culture was one of the major influences on the development of much of the Middle East and other parts of the Islamic world. While there have been large numbers of studies relating to the traditional Western views of sea power, with a strong emphasis on England, the United States and some European powers, much non-Western thinking on sea power remains a mystery. It would thus seem logical to start a study of International thinking on sea power at its beginning: in Ancient Egypt.

Of course, Egypt was not the only archaic state; civilisations also arose independently in Mesopotamia, the Indus Valley, China, Meso-America and elsewhere. The advantage of using Egypt as a case study is the abundance of evidence available. Evidence for sea power may be found in the surviving Ancient Egyptian written records, as well as in the archaeological remains. Depictions of ships are numerous, while several Ancient Egyptian boats have survived for thousands of years.[11] The evidence is sufficiently detailed to ensure that a study of this type may bring forth new and meaningful insights into Ancient Egyptian sea power and the origin of naval forces.

Outline

This study provides an overview of Ancient Egyptian sea power by examining the written and archaeological evidence to develop an explanation for the origin of naval forces. The applicability of sea power during the formation of the Egyptian state is considered, as is the important contribution of naval forces to the rise of central government and state building processes. Through examination of a broad range of Egyptian cultural customs and beliefs it is possible to gain a deeper understanding of maritime Egypt. As with modern naval forces, much of what is common practice at sea is often left unsaid and unrecorded. The depth of the naval influence on a maritime state is often visible within their image of themselves, their gods and their language. Changes in Ancient Egyptian maritime technologies are also examined to understand better the boat and ship capabilities used by the Ancient Egyptians. A review of the maritime operations of the Ancient Egyptian naval forces follows. The modern concept of a span of maritime operations, including military, diplomatic and constabulary, is used to categorise and evaluate Ancient Egyptian operations. This section, along with the associated listing contained in Appendix 1, reveals the extent and variety of the evidence of the influence of sea power on Ancient Egyptian history. Despite a few minor differences, a somewhat surprising degree of similarity may be observed between the naval activities of the Ancient Egyptians and those undertaken by today's navies. The information evaluated will be used to form an interpretive model for the origin of naval forces in Ancient Egypt.

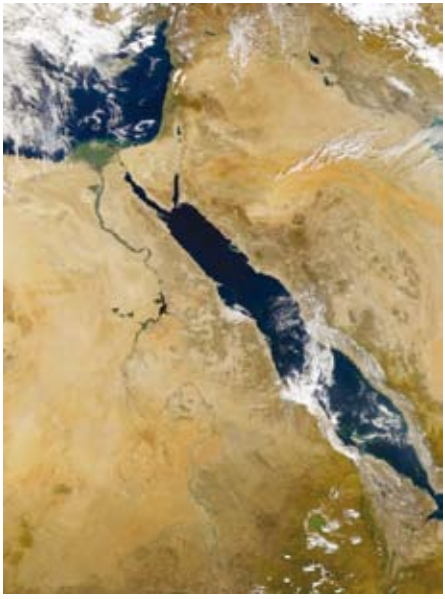
Sources

As with all historical events, the evidence has to be used with caution. This is especially so when dealing with Ancient Egypt, where the evidence includes archaeological material, artistic representations and written sources. The first cautionary note is that it is just not possible to obtain a complete history detailing all Ancient Egyptian maritime operations. Although the relative chance of survival in Egyptian archaeological contexts far exceeds that of less ideal archaeological contexts, the surviving Egyptian material still suffers from an archaeological bias. Most of the surviving material comes from funerary deposits uncovered in the dry desert fringes of Upper Egypt, and numerous biographical inscriptions have been discovered in private tombs located in the desert verge adjacent to the Nile. However, the Nile Delta region and the settlement of the Nile Valley itself are under-represented in the archaeological record, largely because the material is buried beneath deposits of Nile mud, is relatively difficult to excavate, and has a lower chance of survival. Monumental carved inscriptions have survived in the ruins of major temple complexes, such as those in the vicinity of Luxor in Upper Egypt. This demonstrates that additional historical information may be found through

similar chance finds in the future. In addition, a number of well preserved papyrus scrolls, which contain valuable information on historical events, have also managed to survive. Still the amount of written information available is nothing more than a trickle from what must have been an abundance.

A further reason for caution when interpreting Ancient Egyptian evidence is that sources are frequently biased towards the royal and official viewpoint. Temples and royal inscriptions were made to serve a purpose, quite often directed at internal propaganda. At times artistic convention was more important than historical accuracy, so depicting defeat was not an option for any inscription of an Egyptian king. Another more subtle feature of the artistic convention arises from the Egyptians' religious beliefs, where in general terms the forces of order were preferred while the forces of chaos were suppressed, perhaps deliberately to emphasise the enduring stability and prosperity of Egyptian kingship.[12] The Egyptian god of chaos, Seth, was also associated with the sea, and it appears that Ancient Egyptian artistic conventions tended to avoid images of chaos, as well as 'chaotic' Egyptian maritime operations.

As the recent history of Egyptian maritime operations is also relatively less well known than that of recent land operations, our inability to obtain a complete list of Ancient Egyptian maritime operations does not come as a surprise. There is still much information to be gleaned from the surviving sources that it is possible to reconstruct a narrative history of Ancient Egyptian sea power.[13]



Satellite image of the Nile and the Red Sea

Extensive use has been made of the original sources relating to Ancient Egyptian sea power in this study. The aim is to provide not only the direct evidence in translation, but to include much of the surrounding text in order to place the evidence in some context. Persons not used to Egyptian texts full of repetition and vague similes should be able to also gather a brief understanding of the cultural differences between the Ancient Egyptians and themselves. Those used to the short, sharp written expression of modern English can use the Egyptian texts as examples where

the telling is equally as important as the content. The modern reader who takes the time to understand the original sources will better understand the limitations of the evidence provided and how tenuous is our ability to interpret what is a long lost culture. In the process they should be rewarded by gaining greater cultural understanding. Unfortunately, many of the surviving ancient documents are damaged and parts of the texts have been lost forever. In such circumstances, three periods '…' are used to indicate a break. The reader is asked to accept such difficulties and to absorb as much as possible from the surviving fragments.

CHAPTER 2 — SEA POWER AND THE EGYPTIAN STATE

Prehistoric Boats

The earliest evidence for the use of boats in Ancient Egypt is circumstantial. Fish bones found at the campsites of prehistoric hunter/gatherers include larger deep-water fish that can only be caught by deep-water fishing in some form of boat.[14] The earliest boats were rafts made from papyrus reeds, similar to those depicted in later tomb scenes depicting fishing and fowling. Temporary papyrus boats enabled hunter/gatherer groups to travel across and along the river between seasonal camp sites. Egyptian mythology often refers to the use of papyrus boats by the gods, during the 'time of the gods' that is before the formation of the Egyptian state. Papyrus boats continued to be used in Pharaonic times for fishing and fowling along the river, but they also retained their religious symbolism as the craft used by the forces of order who entered the wetlands to defeat the forces of chaos.

As the Egyptians adopted Neolithic lifeways (approximately 5500 BCE), including the introduction of agriculture and animal husbandry, they continued their reliance on boats to utilise the resources of the Nile. It is likely that wooden boats were first developed at this time, with sedentary villagers investing greater effort to construct more permanent boats suitable for fishing, fowling and transportation. Later evidence suggests that the earliest wooden boats were typically of a shell construction, that is a combination of planks joined together with mortise-and-tenon joints and then sewn together to form a keel-less hull.[15] It is possible that some of the earliest Neolithic boats were owned communally, with each plank being held by a member of the village when not in use.[16] Although there are a few simple models of boats dating to the Neolithic period, it is with the rise of chiefdoms during the Egyptian Predynastic period (3700 to 3050 BCE) that there is evidence of widespread use of boats.

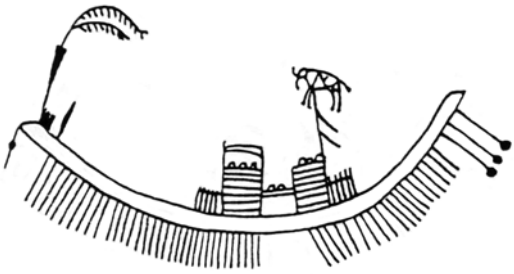
The Egyptian Predynastic period is characterised by numerous boat depictions, including what appears to be a recurring maritime theme on rock art and decorated pottery of that period.[17] There are three types of boat depiction during the Egyptian Predynastic period: the papyrus boat, the ceremonial boat and the war-canoe.[18]

Papyrus boats were still being built in Africa until recent times, in Lake Tana and Chad, and their method of construction provides insight into their Ancient Egyptian equivalents. Egyptian papyrus boats were constructed using dried papyrus plants (each up to 5m high and 15cm thick at the base) bound together to form bundles, which were then tied together to form the desired boat shape. The narrow ends would be raised and tied back to form an upright bow and stern. While single papyrus bundles were used to fish or cross the Nile, quite complex papyrus boats were also constructed by binding multiple large papyrus bundles and could be up to 15m long and 3m wide.[19]

The ceremonial boats were most likely developed from the larger papyrus boats with upturned ends, used for chiefly ceremonies and other ritual purposes. By the Egyptian Predynastic period they had grown in size and hence a stronger wooden construction was required, although they retained the basic shape of the original papyrus boat with the raised bow and stern. Pharaonic models of divine barks and funerary barks clearly show that the raised bow and stern form was retained.

War-canoes were most important from the viewpoint of the origin of naval forces and ancient sea power. The Neolithic wooden boats grew in size during the Predynastic period to accommodate larger crews. The resulting long thin boats developed into war-canoes with two rows of paddlers, papyrus shelters, a steering oar, a standard and typically a branch on the bow. They were constructed from two wooden side lengths and a wooden bottom length made from thin planks sewn together. Such war-canoes varied in length from approximately 15m for 20 oarsmen (small war-canoe), 27m for 52 oarsmen (large war-canoe), and 38m for 80 oarsmen (maximum crew size).[20]

It is also possible that sails were used during most of the Predynastic period, as diamond shaped representations with 'masts' have often been interpreted as temporary sails. The earliest depiction of a sail on a boat can be dated to the end of the Predynastic period, about 3050 BCE.



Prehistoric war-canoe

Egyptian State Formation

Defining what constitutes a state is an important first step. Many archaeologists use factors such as changes in population, social organisation, economic organisation, settlement patterns, religious organisations and architecture to classify societies into bands, tribes, chiefdoms and states (refer to Table 2).[21] However, such classification must be used with caution, for it is a model for interpretative purposes, which is non-linear or deterministic, and should not be used to make value judgments on levels of 'civilisation' or to infer that any single snapshot of a society is better or worse than any other society.[22] For the purposes of this study, archaic states are defined by their attributes: typically a ruler (often a king) exercising authority over a population generally over 20,000 people in a class-based hierarchy, including a separate priestly class; using centralised officials to collect tribute-based taxation and to enforce the laws; with cities, towns and frontier defences that often include palaces, temples and other public buildings.

Modern theories on the formation of archaic states do not rely upon a single explanation but rather emphasise the combination of many factors. Such multi-variate explanations often include ideological factors, political power, economic factors, technological change, geographic and environmental factors, social differentiation, communications and trade, population pressure and warfare.[23] Human agency is sometimes also cited as a further contributing factor. Of course, the relative importance of each contribution does vary widely between scholars. Although sea power is not normally listed as a factor in the formation of archaic states, it did contribute to some degree in many of the multi-variate explanations listed above. For example, in Ancient Egypt the availability of maritime forces not only facilitated communications and trade within Egypt and between Egypt and its neighbours, they were also used by the earliest chiefs and kings to conquer their enemies, to threaten their rivals, to coerce their allies and to consolidate their power. Ancient Egyptian sea power acted as a catalyst for some of the most important contributions in the formation of the Egyptian archaic state.

In Egypt before the Pharaohs, society grew in size and complexity from bands during the Palaeolithic periods, to tribal communities during the Neolithic period, to chiefdoms during the early and middle Predynastic periods, to city-states during the late Predynastic period, until the formation of the archaic Egyptian territorial state during the Early Dynastic period (c. 3050-2686 BCE).[25]

If the evidence for boats in Egyptian prehistory is considered, instances where sea power has influenced the rise in social complexity within Egyptian culture start to emerge. It is possible to see that Egyptian civilisation is not only predicated on the existence of the Nile but also on the development of a maritime Egypt and the utilisation of an

	BAND	TRIBE	CHIEFDOM	STATE
TOTAL NUMBERS	Less than 100	Up to a few 1000	5000 – 20,000+	Generally 20,000+
SOCIAL ORGANISATION	Egalitarian Informal Leadership	Segmentary society Pan-tribal associations Raids by small groups	Kinship-based ranking under hereditary leader High-ranking warriors	Class-based hierarchy under king or emperor Armies
ECONOMIC ORGANISATION	Mobile hunter-gatherers	Settled farmers Pastoralist herders	Central accumulation and redistribution Some craft specialisation	Centralised bureaucracy Tribute-based taxation Laws
SETTLEMENT PATTERN	Temporary camps	Permanent villages	Fortified centres Ritual centres	Urban: cities and towns Fortified defences Roads
RELIGIOUS ORGANISATION	Shamans	Religious elders Calendrical rituals	Hereditary chief with religious duties	Priestly class Pantheistic or monotheistic religion
ARCHITECTURE	Temporary shelters	Permanent huts Burial mounds Shrines	Large scale monuments	Palaces, temples and other public buildings
EARLY EGYPT	Egyptian Palaeolithic	Egyptian Neolithic	Egyptian Early and Middle Predynastic	Egyptian Late Predynastic and Early Dynastic
ARCHAEOLOGICAL EXAMPLES	All palaeolithic societies, including Palaeo-Indians	All early farmers, (Neolithic/Archaic)	Many early metalworking and formative societies, eg. Mississipian, USA and Smaller African Kingdoms	All ancient civilisations eg. in Mesopotamia, Peru, Near East, India and China; Greece and Rome
MODERN EXAMPLES	Eskimo, Kalahari Bushmen, Australian Aborigines	Pueblos, Southwest USA, New Guinea Highlanders, Nuer & Dinka in East Africa	Northwest Coast Indians USA, 18th century Polynesian chiefdoms in Tonga, Tahiti and Hawaii	All modern states

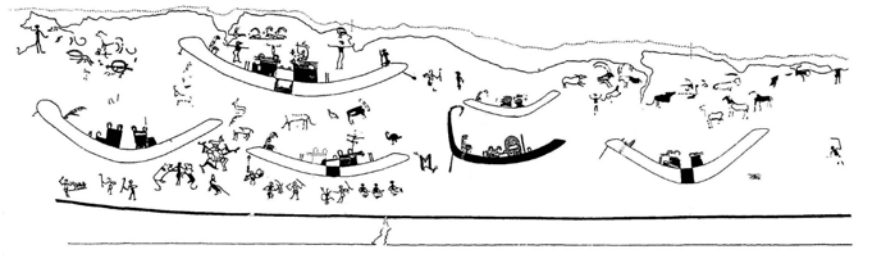
Table 2: Classification of Societies[24]

early form of sea power.[26] Ideas were communicated, objects were traded and wars were fought; with sea power as a facilitator. As Egyptian society grew in complexity from bands to villages to chiefdoms to city-states and into a territorial state, it was paralleled by increased sophistication in maritime technology and the ability to effectively use sea power. As papyrus boats were replaced by wooden ones, their ownership changed from individuals to communities and ultimately to the powerful elites of each society. The most powerful could assemble and utilise the most war-canoes, until the actual presence of maritime forces became a representation of social power itself. The symbolism of maritime power, as represented by the largest ceremonial boats and war-canoes, ultimately overawed any potential rivals to the Egyptian king. In this way Egyptian state formation, and the consolidation of centralised power, should be directly linked with the influence of sea power along the Nile.

Complex boat scenes dating to the Egyptian Predynastic have been found carved on decorated ivories, on painted linen, as well as in part of a large scene painted on a tomb wall. All three types of Predynastic boat: the papyrus boat, the ceremonial boat, and the war-canoe are found in these complex depictions. The boats themselves have frequently been interpreted as symbols of prestige, used for ceremonial display rather than for any practical purpose. Such interpretations beg the question that if the Predynastic boats were not of practical use, how could they ever become prestige symbols? More recent examples of warship construction for display confirm that vessels assume prestige only when they also have an underlying practical utility.[27]

Although the majority of the boat scenes are well known to Egyptologists, there have been relatively few studies of how the scenes might relate to the development of the Egyptian state and its culture. Common interpretations of the boat scenes are either as religious representations linked with religious rituals, or the passage of the deceased to their afterlife.[28] However, it would be preferable to interpret the boat scenes as pictorial narratives consisting of the three major themes: 'hippopotamus hunting' on papyrus boats; the ceremonial boat participating in 'victory' celebrations; and the 'expedition' of war-canoes.[29] Whereas elements of the first two themes continued into Pharaonic times, the 'expedition' theme vanished with the later stages of the Egyptian Predynastic period. Ethnological parallels demonstrate that maritime cultures in pre-state or chiefly societies with strong nautical traditions often use representations of boats as symbols of elite competition and political power. During the Egyptian Predynastic period the war-canoe was indicative of a nautical expedition tradition, where adventurers, seafarers and raider/traders were able to operate relatively freely along the Nile and in Egypt's neighbouring seas. It is likely that numerous smaller 'war-canoes', representing relatively egalitarian smaller communities, were replaced by fewer large 'war-canoes', representing increasingly ranked communities under the

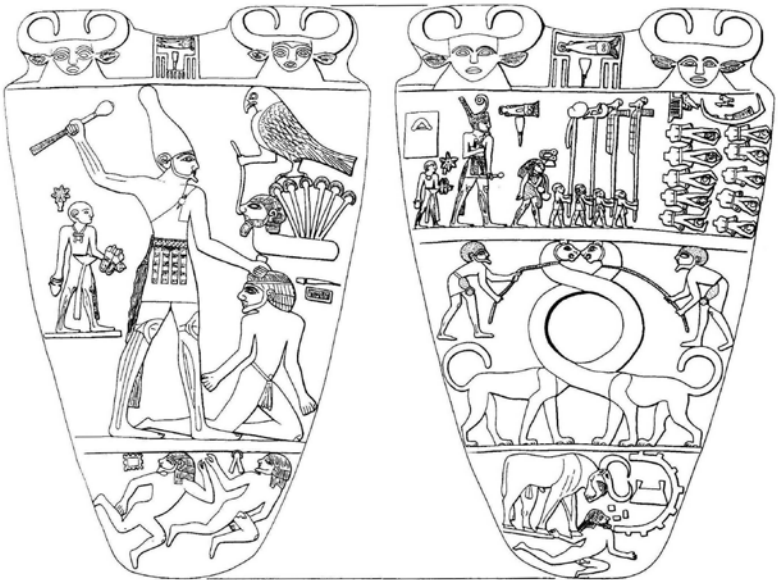
leadership of a paramount chief or king. As the power of individual kings grew, the various Egyptian city-states of the Late Egyptian Predynastic period were either defeated or became subordinate to a single king of a newly formed Egyptian territorial state. It is interesting to postulate that the formation of the Egyptian state was witness to the suppression of individualism, as represented by high ranking adventurers and raider/traders. All 'expeditions' were centralised and became the sole domain of the new king of Egypt. In line with these changes, the application of chiefly sea power was replaced by maritime forces that were coordinated as part of the central authority of the newly formed Egyptian state.[30] Indeed, there is a direct linkage between the formation of the Egyptian state and the origin of Ancient Egyptian maritime forces.



Complex boat scene from the Painted Tomb 100 at Hierakonpolis

The consolidation of Egyptian political power under the first kings probably resulted from a combination of wars and alliances. Warfare in the late Predynastic period would have involved expeditions of 1000 to 2000 men and up to 50 long boats.[31] The earliest evidence for maritime warfare is found carved on the Gebel el Arak ivory knife handle. This image includes a scene with hand-to-hand combat, a row of ceremonial boats, a row of war-canoes and the corpses of the defeated enemies.[32] The reverse side contains images of a 'hero taming animals'. Both images represent the power of a ruler, with the forces of order overcoming the forces of chaos. However this maritime fight is more symbolic than historical – the underlying principle that maritime forces may be used to defeat enemies and celebrate victory must have had some currency at the time the handle was carved. The Gebel el Arak knife itself may have been used in ceremonies associated with conflict and royal power, probably involving animal sacrifices or similar rituals. The Predynastic people would have believed that such ceremonies contributed to their success in warfare.

The object that most symbolises the formation of the Egyptian state is the Narmer Palette.[33] This ceremonial palette probably commemorates the unification of Upper and Lower Egypt under its first ruler, King Narmer.[34] Although there are many interpretations of this object, it is most probable that the depictions represent a narrative



The Narmer Palette

of King Narmer's victory, and as such it includes a variety of scenes, including a 'king smiting' scene, a 'taming animals' scene and a 'fort destruction' scene. Another scene includes a boat above decapitated enemies, and this may be interpreted as the result of some naval victory. It is interesting to note that as the central image of the powerful king dominates the iconography of the times, the influence of sea power is played down. It is perhaps not too much of a leap of faith to correlate this centralised Egyptian imagery with the overthrow of the last elements of the independent chiefs and their raider/trader predecessors.

Sea Power and the Opening of the Western Mind

Many of today's naval historians, brought up within a Western academic tradition, have seen a link between the liberal democratic and capitalist traditions and the rise of sea power. One widely renowned scholar has even suggested that maritime supremacy was responsible for the development of today's Western beliefs and systems of government, 'the opening of the Western mind', and that the distinguishing mark of maritime power is freedom.

> *Both trade and consultative government require the widest dissemination of information and free expression of opinion; thus the basic freedoms of trade spread through all areas of life, tending to break down social hierarchies and the grip of received ideas, creating more open, mobile and enterprising cultures. Liberty has always been the pride and rallying cry of powers enjoying maritime supremacy.*[35]

Such thinking may be traced back to the seminal works in naval strategy written by Alfred T. Mahan and Julian S. Corbett before the outbreak of World War I; at a time when European maritime empires had spread across the globe.[36] Using the British Empire and Royal Navy as examples, these early naval strategists emphasised the importance of commercial trade and sea communications toward achieving maritime supremacy. Both however, contained underlying assumptions that Western liberal democratic forms of government and free enterprise capitalist economies were both prerequisites for becoming and remaining a global sea power. Other scholars have emphasised the superiority of 'independent supreme commanders, innovative soldiers and a sovereign legislature', over 'rigid hierarchy and complete submission of the individual'.[37] The supposed superiority of the 'Western way of war' is more apparent than real.[38]

The advantage of using evidence of ancient history and archaeology is that it can extend our comparative telescope over thousands of years instead of hundreds of years.

Over the previous pages it has become clear that the rise of Egypt was a very long process, undertaken over thousands of years, characterised by increasing political power, social complexity, economic organisation and trade, as well as increasingly complex religious beliefs and other ideological factors. It is possible that increased naval power did help the state formation process along the path towards an integrated Egyptian territorial state. But what of the so-called Western institutions? Where are the liberal democratic and capitalist traditions in Ancient Egypt?

Ancient Egyptian society was a formidable kingdom with a king exercising the power of life and death over his subjects, and where a centralised bureaucracy controlled all trading, economic and religious activities. In such a society there was little room for liberal democratic and capitalist ideologies. However, Ancient Egyptian society was not static. During the height of the Old, Middle and New Kingdoms, the royal power was strongest; but during the three intermediate periods, actual royal power was weak and there were effectively many warlords and small states within Egypt rather than a unified Egyptian state. The actual extent of Egyptian sea power also fluctuated in association with Egyptian royal power, and it will be possible to see how the characteristics of actual Egyptian maritime operations changed over time when the evidence is examined later in this book. For now let us examine the evidence for the characteristics of Egyptian sea power during the Prehistoric Period and the rise of the Egyptian state.

The earliest Egyptian boats were practical craft used for fishing and transportation rather than physical embodiments of Egyptian sea power. It was during the Egyptian Predynastic period that wooden boats were used by the rising elites, the chiefs and their families for commercial, military and political purposes. Boats were used not only to exercise power, but became important symbols of each chiefly power. As the Egyptian Predynastic chiefdoms grew in power, they increasingly used maritime forces to seek out new communities for trade, to defeat opponents, and to intimidate and overcome rival chiefdoms. The power of individual chiefs and their families grew in parallel with their chiefdom's population, economy, trade and sea power. For much of this time, the new chiefly elites operated in relative freedom, with few limitations on their ability to trade and their efforts to increase their status and power. Using ethnographic parallels from recent chiefly societies, it would not be too far from the mark to suggest that the Predynastic chiefly elites operated in a politically liberal, free-thinking and consultative environment, where they redistributed agricultural surpluses and status goods to maintain social advantage and political power within their communities. Of course, the vast majority of the population in the Egyptian Predynastic chiefdoms were poor villagers; families of agricultural labourers living hand to mouth, relying upon favours and protection from their local chief for their ongoing well being and survival.

As the Egyptian Predynastic chiefdoms evolved some grew into regional kingdoms, essentially Egyptian city-states, and in turn rivalry and alliances between the city-states led to the formation of a single unified Egyptian territorial state under the Egyptian Pharaoh, and the King of Upper and Lower Egypt. Sea power was a contributing factor to the state formation process, and by using his maritime forces effectively the first king of Egypt was able to consolidate rule. However, these early kings did not have absolute control of Egypt's regional elites, the powerful descendants of the Predynastic chiefly families, and it was not until the Old Kingdom (about 2600 BCE) that a strong

centralised bureaucratic administration, dependent on the king and the royal family, replaced the old elites. The king's family was appointed to administer regions that had once been under the authority of local elite families. As the ability of the regional elite families to maintain maritime forces and to be involved in long distance trade declined, the king and his royal authority placed limits on free trade, independent liberal thinking, consultative decision-making and private wealth creation. By the Old Kingdom, the Egyptian king was authorising royal trading expeditions, endorsing centralised religious ideologies, and using royal favours for the distribution of status goods and services. Egyptian sea power remained strong throughout the Old Kingdom period even though it was the archetypal version of a centralised, authoritarian government supported by landholding elites and professional bureaucracies.[39]

There is a noticeable trend in the rise of Ancient Egyptian sea power. The earliest growth of Egyptian sea power occured during a period of relatively high individual freedom and coincided with great advances in the arts, crafts, technology, language and cultural identity. But Egyptian sea power remained quite strong after the formation of the Egyptian state, even when the society was strongly centralised, bureaucratic and authoritarian. If the rise of early modern European maritime states and their Western liberal democratic and capitalist traditions are reconsidered, it is possible to see a parallel development.[40] The freedoms cherished by the early European mercantile communities that precipitated the rise of global maritime empires gradually gave way to more centralised maritime states, which used maritime and naval forces to generate and maintain worldwide empires.[41] Modern Western maritime states maintain powerful forces that have the ability to exercise sea power across the globe, under centralised and authoritarian command. Western sea powers – those nations with strong maritime traditions – do not automatically generate freedom or the so-called Western values of liberalism, democracy and capitalism. Rather, all societies, should consciously safeguard the values that they most cherish.

CHAPTER 3 — A DEEPER UNDERSTANDING OF MARITIME EGYPT

Egyptian Mariners

Understanding Egyptian sea power requires an understanding of the people who served in the Egyptian maritime forces. Mariners often have special customs, traditions and a distinct language that creates a distinction between them (the people of the seas) and the rest of the societies to which they belong (the people of the land). They also tend to be more interested in marine practice, rather than writing about it. In modern times, ship's captains and other elite mariners have from time to time written down their experiences in biographical or historical form, while others have sought comfort in writing marine literature. There was a similar trend in Ancient Egypt; most of the surviving sources are from elite mariners and are mainly within the biographical and literature genres. To gain some insight it is preferable to start with recent descriptions of Egyptian mariners.

In 1836, Edward Lane published a description of the Nile boatmen of his time:

> *The navigation of the Nile employs as great number of the natives of Egypt. The boatmen of the Nile are mostly strong muscular men. They undergo severe labour rowing, poling, and towing, but are very cheerful; and often the most so when they are most occupied, for then they frequently amuse themselves by singing. In consequence of the continual changes which take place in the bed of the Nile, the most experienced pilot is liable frequently to run his vessel aground; on such an occurrence, it is often necessary for the crew to descend into the water to shove the boat off with their backs and shoulders. … Sudden whirlwinds and squalls being very frequent on the Nile, a boatman is usually employed to hold the main-sheet in his hand, that he may be able to let it fly at a moment's notice.*[42]

Modern Nile boatmen are not much different from those of the early 19th century; they have great strength and endurance, and their knowledge of local nautical conditions match their intelligence and other worldliness. In many ways the boatmen have their own cultural identity within the Egyptian community, as their customs and beliefs often differ from their peasant farmer counterparts.

Modern Nile boatmen at Sais in the western Delta

The lives of the modern Nile boatmen are similar in many ways to those of ancient times. A recent study explored the world of the Nile boatmen involved in commercial shipping in Ancient Egypt up to the late Roman period, in order to define their duties and their place in society.[43] Whereas the Nile boatmen excelled in the riverine environment, seagoing mariners developed a deep understanding of the coastal conditions of Egypt and its neighbours as well as of the adjacent seas. Egyptian mariners were specialists in their field, whose work both removed them for long periods from their families and friends, and placed them in dangerous situations where they might never return to see their loved ones again. Papyrus Lansing describes how a scribe saw the hardships of the Egyptian mariners:

> *The ship's crew from every house of commerce, they receive their loads. They depart Egypt for Syria, and each man's god is with him. But not one of them says: 'We shall see Egypt again!'* [44]

The Chester Beatty papyrus also describes these hardships and the fear of death by crocodile:

> *As for the sailor, it is said that crocodiles have taken up their positions to spy on him, while the ship, the town, is in a fine predicament. For the sailor is exhausted, while the oar is in his hand, and the lash on his back; his stomach is empty of nourishment.*[45]

But a member of the Egyptian elite, which included most scribes, would be offered the chance of an Egyptian burial with all the associated rites and rituals that guaranteed a suitably comfortable afterlife. The typical Egyptian mariner was of a lower status where the most they could expect was a simple burial in Egypt, if they were not eaten by crocodiles, lost at sea, or did not die in another country. This would suggest that the Egyptian mariners' belief system differed from that of the Egyptian elite, which tends to characterise our modern perceptions of Ancient Egyptian funerary beliefs.[46]

The Ancient Egyptian term for sailors, *seqedu*, may specifically refer to those men experienced in using the sails, while terms such as *nefeu*, *ist* and *aper* are generic terms for the crew. The sailors (or recruits) were also called *uau*, a term that applies equally to the army as to maritime service. Some depictions from the New Kingdom show sailors wearing a dress apparently peculiar to the maritime forces; this includes a leather loincloth designed to provide some cushioning when rowing. A finely made leather loincloth, probably used for parades, was found in the tomb of a fan-bearer named Mayherpery.[47] The variety of Egyptian terms in use, coupled with their often specific usage, implies that the Ancient Egyptians operated in a sophisticated maritime environment and that their nautical knowledge was quite broad. Modern translators would typically translate each of the above terms as 'sailor' because the complex differences between the Ancient Egyptian terminology are not fully understood. The other terms used for members of a ship's crew support the view of a sophisticated Egyptian maritime sphere. For instance, the Egyptian term for navigator was *nefuu*, helmsman was *hemu* or *iry-hemyt*, a ships guardian was the *sau*, the transport officer was the *meshekebu*, the oarsmen were the *khenyt*, and the man at the prow or lookout was known at the *iry hat* (literally 'the one who is at the head').[48]

As it was necessary to include a noble's rank and titles in their tomb to ensure their equivalent rank in their afterlife, it is feasible to reconstruct much more about the maritime careers of the Egyptian elite. Firstly, there were an abundance of military titles used in Ancient Egypt. While some of these were undoubtedly associated with land operations specifically, others that have been translated into their modern army equivalents may have also related to maritime operations. For example, the Ancient

Egyptian title *imy-r mesha* is often translated as 'overseer of the army' or 'general of the army', whereas it can also be translated as 'general of the marines'. Indeed, the word *mesha* for 'army', which often uses a hieroglyph of a kneeling bowman, could be interpreted as one of the bowmen who were used as marines onboard an Egyptian travelling or seagoing ship. In many instances *mesha* could be translated as 'marines'. The title *imy-r pedjty* 'captain of archers' could be translated, from a maritime perspective, as 'captain of marines'. In these circumstances, as the context is not totally clear from the biographical inscriptions found in the noble tombs, the tendency among Egyptologists has been to use the army equivalent rather than the maritime equivalent when translating.[49]

A number of nobles' titles are clearly of a maritime nature, especially those using one or more hieroglyphs with a nautical origin. Some of the earliest titles from the Old Kingdom and Middle Kingdoms are 'commander of ships', 'ship's captain', 'captain of sailors', 'commander of sailors' and 'scribe of the marine'.[50] During the New Kingdom new titles appear, in addition to some of the earlier ones, 'fleet captain', 'captain of the ships of the king', 'captain of galleys', 'ship's captain', 'captains of marines' (literally 'captain of the ship archers'), 'officer of the ships', 'officer of marines', 'standard-bearer of the ship', 'standard-bearer of the marines', 'commander of the rowers', 'chief of the rowers', 'ship archers', and many more. Non-seagoing titles, such as 'harbour master' and 'ship-builder', were also used.[51] The broad extent of the titles used suggests that the Ancient Egyptian maritime forces were commanded by trained and experienced marine professionals. Scholars who believe that Egyptian sea power is frequently overstated, and who prefer to see a Syrian source for East Mediterranean maritime activities, should reflect upon the complexity and sophistication of the Egyptian Bronze Age forces in comparison with their non-territorial state maritime neighbours.

For the New Kingdom period it is possible to reconstruct the organisation of the Egyptian maritime forces.[52] The sailors, *uau*, were under the leadership of a petty officer, perhaps either the *kherep-khenyt* 'chief of the rowers', *khery-khenyt* 'commander of the rowers', or the *tay-seryt* 'standard-bearer'. The 'ship's captain', the *hery-wesekh* but also known by various other Egyptian terms, who was in charge of the crew and probably the ship itself, would have been of a higher status than the sailors. Promotion of 'ship's captains' were most likely to a more prestigious ship. A number of senior officials had higher maritime commands like 'chief of all the king's ships' or 'chief of the broad ships of the god's estate'. Were these the admirals of the Ancient Egyptian maritime forces? Such commissions may have been for administrative duties concerned with shipping but could have also included some military activities. Such higher ranks specifically applicable to the maritime forces are quite rare in the surviving Egyptian records, so it is necessary to look elsewhere for the real Egyptian admirals.

Once again it is necessary to emphasise that there was no functional separation between the Egyptian army and navy; all essentially formed part of the Egyptian maritime forces. The military career of Weni, for example included commands as a 'ship's captain' as well as being in charge of the king's army. The career of a noble named Didw states that he was a sailor on the ship *Mery-Amun* before he became 'standard-bearer of his majesty's bodyguard'.[53] The joint nature of the Egyptian military is most prevalent at the senior ranks in command of their maritime forces, where the kings and their highest officials – the viziers – held command. The vizier Rekhmire, under Thutmose III, has left us a description of the wide-ranging duties of a vizier, including: the administration of maritime forces, the regulation of the army, administration of fortresses, and control of tree-cutting.

> *It is he who exacts the ships for every requisition made upon him. It is he who dispatches every messenger of the king's house to … When the king is with the army, it is he who makes report … Report is made to him by all the officials of the head of the maritime forces, from the highest to the lowest. It is he who seals the edicts … of the keeper … who is dispatched with a message of the king's house.*
>
> *The commander of the ruler's table is brought to him, to his hall, together with the council of the army, in order to give to them the regulation of the army.*
>
> *Every matter is reported to him; there are reported to him the affairs of the southern fortress; and every arrest which is for seizing …*
>
> *It is he who dispatches to cut down trees according to the decision of the king's house.*[54]

This short selection from 'The Duties of a Vizier' would suggest that they acted as admirals as well as performing many of the other duties of military command and administration. The vizier Rhekhmire, and presumably most viziers, had a certain authority over the Egyptian maritime forces, but not even one of his titles hints at his command. This is also true for the majority of other commanders of maritime forces. For example, Nehesy who led Queen Hatshepsut's expedition to Punt was 'prince, count, treasurer of the King of Lower Egypt, sole companion, and chief treasurer' but his biography makes no mention of a maritime related title.

Egyptian Beliefs and Ideology

Most people know something about the complex system of Egyptian religious and secular beliefs. Here it is necessary to only briefly examine the depth of the nautical influence on the Ancient Egyptian mind. It should not be forgotten that the very land they occupied was inundated by a flood of the Nile each year, and a boat was essential for many activities during the inundation. Boats and ships were not only essential to the Egyptians on a secular basis, they were deeply imbedded in the very fabric of many Ancient Egyptian beliefs and ideologies.[55]

Boats and ships were an essential part of the Ancient Egyptian mindset.[56] The journey from death to the afterlife involved crossing 'the Winding-Waterway' by boat to the banks of the 'Field of Reeds' – an Egyptian heaven. Boats were essential for the living to travel up and down stream and to cross the Nile, but also for the deceased to reach the afterlife.[57] The earliest religious document from the Old Kingdom, the Pyramid Texts, includes:

> *O sounding poles of Horus, O wings of Thoth, ferry me across, do not leave me boatless.*[58]

The sun god Ra travelled across the sky each day in his divine bark, propelled by a crew of powerful gods. The deceased King Teti of the 6th Dynasty, joins Ra in this daily journey.

> *Teti will take his seat in the bow of Ra's bark:*
> *The sailors who row Ra, they shall row Teti!*
> *The sailors who convey Ra about lightland,*
> *They shall convey Teti about lightland!* [59]

When noble Egyptians died their bodies went through elaborate rituals which often included a procession on their funerary boat. Such boats are often depicted in the noble tombs undertaking a pilgrimage by boat to one of the Egyptian sacred sites of Busiris or Abydos. Another common scene in noble tombs has the deceased crossing the Nile from east to west and then carried overland to the necropolis. This also represents a spiritual journey of the deceased on the path to the other world.

Further evidence of the use of boats in Ancient Egypt may be seen in the religious festivals where a god's image, typically a statue in an enclosed cabinet, is transported along the Nile in its divine bark. At first during such festivals the god's image travelled along the Nile from temple to temple, but in time the divine bark itself was transported on land and along the Nile as part of the processions. Temple scenes at the Karnak and Luxor temples show the divine bark of Amun being carried by the temple priests during such processions. A building inscription from the reign of Amenhotep III describes the Sacred Bark of Amon:

> *King of Upper and Lower Egypt: Nibmare, Part of Ra; Son of Ra; Amenhotep III, Ruler of Thebes. I made another monument for him who gave birth to me, Amun-Ra, lord of Thebes, who established me upon his throne, making for him a great barge for the 'Beginning-of-the-River' named: 'Amun-Ra-in-the-Sacred Barge', of new cedar which his majesty cut in the countries of God's-Land (Lebanon). It was dragged over the mountains of Retjenu (Syria) by the princes of all countries. It was made very wide and large, there is no instance of doing the like. Its … is adorned with silver, wrought with gold throughout, the great shrine is of electrum so that it fills the land with its brightness, its bows, they repeat the brightness; they bear great crowns, whose serpents twine along its two sides; they exercise protection from behind them.*[60]

Such deep-seated beliefs that associated Egyptian nautical practices with the gods and the afterlife also left their mark on the ideology of living Egyptians. The autobiographic inscriptions left in many noble tombs include standard declarations such as: 'I ferried across the boatless in my ships' or similar.[61] 'I gave bread to the hungry, clothes to the naked. I carried the boatless to the shore. I buried him who had no son. I made a boat for him who lacked one.'[62] During the period of state collapse during the First Intermediate Period, nautical metaphors were used to emphasise the troubled times. 'One seeks water for ships to sail on, its course having turned into shoreland.'[63] The tale of the Shipwrecked Sailor is itself a metaphor for the opposing forces of good and evil, where the Giant Snake represents the Ancient Egyptian god Apophis, who is often linked with the chaotic behaviour of the sea. Another tale, the 'Tale of the Eloquent Peasant' sometimes used nautical terms to emphasise the advanced linguistic abilities of the hard done by peasant:

The divine bark of Amun carried upon the shoulders of priests

When you go down to the sea of justice,
And sail on it with a fair wind,
No squall shall strip away your sail,
Nor will your boat be idle.
No accident will affect your mast,
Your yards will not break.
You will not founder when you touch land,
No flood will carry you away.
You will not taste the river's evils,
You will not see a frightened face.
Fish will come darting to you,
Fatted fowl surround you.
For you are father to the orphan,
Husband to the widow,
Brother to the rejected woman,
Apron to the motherless.[64]

Once again order and stability are equated with good nautical abilities. The concept of joy and happiness is also intimately linked with nautical pursuits. The tale of King Sneferu's boating party on the Papyrus Westcar, is one of the magical descriptions included in a later Middle Kingdom tale.

> *His majesty said to him: 'I have gone through all the rooms of the palace in search of relaxation and found none.' Djadja-em-ankh said to him: 'May your majesty proceed to the lake of the palace. Fill a boat with all the beautiful girls of your palace. Your majesty's heart will be refreshed by seeing them row, a rowing up and down. As you observe the fine nesting places of your lake, as you observe its beautiful fields and shores, your heart will be refreshed by it.'*
>
> *Said his majesty: 'Indeed, I shall go boating! Let there be brought to me twenty oars of ebony plated with gold, their handles of sandlewood plated with electrum. Let their be brought to me twenty women with shapeliest bodies, breasts, and braids, who have not yet given birth. Also let there be brought to me twenty nets and give these nets to these women in place of their clothes!' All was done as his majesty commanded.*[65]

The tale of King Sneferu's boating trip reveals the lighter side of Egyptian maritime activities. In this chapter the separation between the mariners of Ancient Egypt and the rest of Egyptian society has become apparent. Their nautical titles and maritime organisation kept them apart from the average agricultural farmers in Egypt, while they were integrated into a military and administrative hierarchy that apparently did not separate the functions of land-based and maritime operations. But, of course, to the Egyptians boating, ships and nautical endeavours were a daily part of their experience. Although the agricultural farmers did not necessarily associate themselves with the mariners, they would have been familiar with boats, ships and marine transportation from childhood. The omnipresence of boats and ships in the daily activities of the Ancient Egyptians was juxtaposed by the presence of maritime activities within numerous Egyptian beliefs and ideologies. In deed and thought, the Ancient Egyptians were indeed a maritime people.

View of the Nile near Sais in the western Delta. Australian gum trees were imported into Egypt during the 19th century to help overcome the shortage of wood.

CHAPTER 4 — CHANGING SHIP TECHNOLOGIES IN ANCIENT EGYPT

A number of authoritative books have described the different technologies of ships and boats in Ancient Egypt, and although some details may have changed due to recent interpretations, they remain essential reading for anyone interested in the subject.[66] For the purposes of this study it will suffice to summarise the major capabilities and technological changes in Ancient Egyptian ship technologies. The overwhelming desire for the Ancient Egyptians to record objects of everyday usage in their tombs for use in their afterlife, means that there are abundant depictions of the types of ships used in Pharaonic times. Royal scenes, including those found in a number of mortuary complexes, also contain inscribed scenes of shipping and related maritime activities. Tomb and temple scenes are an accurate source for many of the technical details of travelling and cargo ships as used on the Nile, as well as for seagoing ships used in the Mediterranean and the Red Seas. During the First Intermediate Period and Middle Kingdom, changing religious beliefs led to an increase in the number of boat models left in tombs for use in the afterlife. In addition, a number of actual boats have been discovered in Ancient Egypt. These boats and boat models add significantly to our understanding of Ancient Egyptian ship technologies.

As the development of the ships of Egypt's prehistory was dealt with previously, the discussion in this section will be limited to the Pharaonic period, ie. from the early Old Kingdom to the end of the New Kingdom, 2686-1069 BCE.

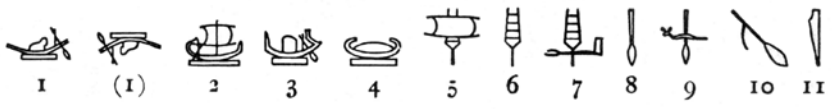
River Vessels

The wooden boats and ships that operated on the Nile River were particularly suited to operations in the often shallow and tortuous waters. Keeping to the main channels, river vessels could navigate over 900km from the Mediterranean to the First Cataract at Aswan; however, these channels changed over time as the Nile silts were deposited along the banks and in the shallow waters of the slower reaches of the river. During the annual inundation, when the river flooded much of Egypt's agricultural land in the Nile Valley and Delta, navigation between settlements along the Nile was particularly hazardous. However, this was also the time when it was possible to move large blocks of stone for architectural works by water over the often large distances between the quarries and construction sites. Clearly what the Egyptians needed were strong and reliable river vessels, with shallow draft and large capacity, operated by experienced boatmen and crews of pyramid builders.

Records from the early Old Kingdom describe the building of ships over 50m long, the construction of 60 barges for the king and the transportation of 40 ship-loads of cedar wood from Byblos in the Lebanon.[67] Such figures confirm the size and extent of the Egyptian maritime capabilities at the start of the Pharaonic era.[68]

By the Old Kingdom, the earliest sewn wooden boats had developed into two styles of river vessels: travelling ships and cargo ships.[69] Travelling ships were light and fast vessels used for the transportation of people, such as royal administrators, their staffs, military commanders and their troops. Travelling ships were the main type of vessel used by maritime forces operating along the Nile River, in both Egypt and Nubia.

The travelling ships evolved from the war-canoes of late prehistory. During the Old Kingdom, many were flat-bottomed with square ends, but rounded hull forms with more pointed bow and stern becoming more common over time. Propulsion was by a combination of rowing/paddling and sailing. Although travelling boats were like all Ancient Egyptian boats and did not have a keel, they were perfectly able to sail in the relatively calm waters of the Nile, but the records also demonstrate that they were also able to sail effectively at sea.[70] The flow of the Nile, downstream from south to north, assisted travelling ship movements when rowed downstream, with Nile currents ranging from about one knot (1.85km/hr) at low water in spring to around four knots at high flood in the autumn. On the other hand the prevailing winds along the Egyptian Nile are from north to south and assisted travelling ship movements when sailed upstream. The very nature of the sailing conditions along the Nile are evident in the Ancient Egyptian written language, where a travelling ship without sail represents 'downstream' and a travelling ship with sail represents 'upstream'.[71]



Hieroglyphic signs depicting ships, sails, oars and a mooring post

One depiction from the Old Kingdom has up to 50 men facing forward to paddle such travelling boats, although a number of other scenes have 14 and 20 paddlers.[72] Some smaller travelling ships had just a few paddlers. Rowing was also common during the Old Kingdom, with depictions including standing and seated oarsmen facing aft. Depictions of Old Kingdom travelling ships have up to 40 rowers, although from 16 to 28 rowers are more common. Many travelling ships had only a few paddlers or rowers depicted, and in such instances the crew used the current or the wind to full advantage. Such scenes reflect a less urgent mission, perhaps a noble visiting a relative or on a religious

pilgrimage. By the Middle Kingdom all paddlers were replaced by rowers; however, many of the essential characteristics of oared propulsion remained the same throughout the Pharaonic period. The use of human energy as the means of propulsion, with larger numbers meaning faster ships, did not significantly change. It appears that when fully manned for a military expedition a large number of oarsmen, who could double-up as marines, was an advantage, while only a handful of oarsmen were desirable for typical transportation duties in a peaceful environment.[73]

During the early Old Kingdom, travelling ships had a removable bipod (or derrick) mast with a single trapezoid sail, (longer at the top than the bottom), positioned forward of centre at approximately one third the length of the vessel. The double mast and trapezoid sail were required to spread the weight of the mast upon the lower hull timbers and to avoid the central shelf that formed the ship's deck. Towards the end of the Old Kingdom, single masts with rectangular sails were more common; by the Middle Kingdom, single masts with rectangular sails had replaced the earlier forms. Most travelling ships used upper and lower yards to support a linen sail that was hoisted and lowered using a halyard, and hence the sails functioned in a manner similar to a modern square rigged sail. Ancient Egyptian square rigged sailing ships would have had difficulties sailing upwind or even tacking into the wind, and in practice the sails were taken down either partially or fully in such circumstances.[74] The square rigged travelling ships were ideally suited to the prevailing conditions when travelling upstream on the Nile. Through a gradual process of innovation and practical developments the sailing technologies improved such that the New Kingdom travelling boats were much larger, sleeker and more efficient than their Middle and Old Kingdom counterparts. Mortise-and-tenon joints were used to construct the four travelling boats that survive from the Middle Kingdom.[75] The hulls became relatively wider and more rounded, (spoon shaped), and New Kingdom travelling boats were constructed with a plank keel.[76] The use of a keel coupled with mortise-and-tenon joints not only strengthened the hull but facilitated shipbuilding. Overall, the evolution of Egyptian shipbuilding was not a technological revolution but rather a gradual process with incremental changes occurring over some 1500 years.[77]

Steering oars were essential to travelling ships, not just because of the limitations of the square sailing rig but in order to avoid obstacles in the dangerous Nile waters. Depictions of Old Kingdom boats had two or more steering oars, larger than normal oars, placed either side at the stern of a travelling ship where they would typically be operated by standing helmsmen.[78] Such early rudder systems were very manoeuvrable but relied on the strength of the helmsmen and the pitch of the blades to change direction. By the New Kingdom the steering oars were sometimes tied to ship's gunwales by manoeuvring cables capable of redirecting excessive loading, with the helmsman using a simple lever

arrangement or tiller to effect changes in direction of the ship. At times a single steering oar was attached to a sternpost and positioned along the centreline at the stern.

Travelling ships of the Old Kingdom often carried a small removable cabin in the rear half of the vessel. By the New Kingdom, the deckhouse was located centrally, at midships. Such cabins were constructed using a light wooden frame with wooden or papyrus walls and roof. As with many of the other features of travelling ships, cabins could be removed when not required. Many of the surviving tomb scenes and boat models had such cabins, for they were intended to be used by the deceased as a means of comfortable transportation in the afterlife. Cabins were unnecessary luxuries that were removed to avoid slowing the ship down whenever travelling boats were utilised for military purposes.

There is a surviving example of an actual travelling ship from the Old Kingdom in the form of King Khufu's ship, on display in its own museum building alongside the Great Pyramid in Giza, Egypt.[79] It has a sleek rounded hull form with upturned bow and stern. Measuring 43.4m long, with a beam of 5.9m, its displacement is around 40 tonnes. It is made of cedar planking, each 13-14cm thick, joined together using wooden pegs and ropes that pass through holes in the planks. Overall the ship's hull is formed from sewn planks with a flat bottom and no keel. A wooden deck is formed by placing hatches on the beams of the hull, while a series of wooden screens for a cabin on the deck aft of midships. It has six pairs of steering oars, ranging from 6.8 to 7.8m long. Neither rowing oars nor mast were found with the boat, because Khufu's ship would have been used as a funerary barge during his burial and towed across the Nile to Giza for the burial rituals. Wooden decorative prongs in the shape of papyrus reeds were added to the bow and stern to form a wooden papyriform representation of the papyrus boat in which the deceased king thought he would travel across the heavens in his afterlife. Other actual boats have survived from Pharaonic times, including four small travelling boats dated to the Middle Kingdom found at Dashur; however, they are not as finely constructed as Khufu's ship.[80]

Hundreds of travelling ship models, mainly from the Middle Kingdom, are held in museums around the world. These include the numerous crewed rowed versions and many travelling boats. One of the most illuminating is the collection of model boats from the tomb of Meketra, the Chancellor of King Mentuhotep II of the Middle Kingdom, which was found at Thebes. Meketra provided himself with a flotilla of ships for use in his afterlife, including seven travelling ships (two used as kitchen tenders and one for fishing), four papyriform yachts (similar to the Khufu ship), and two papyrus fishing boats.[81] If full size, the eight travelling ship models would be between 9 and 11m long, and each capable of accommodating a crew of approximately 20 men. This would give Meketra access to a maritime force of up to 160 armed men, a force not inconsiderable

during the Middle Kingdom. If a nobleman like Meketra was able to maintain a flotilla of travelling ships in life as it appears in his tomb, then he was also capable of using the same ships armed with his own troops as an expeditionary force, for trading or even military activity. It is possible to see that Meketra's example supports other evidence for the reduced power of the Egyptian kings during the Middle Kingdom. The kings in turn relied heavily upon the provincial nobility for military and economic support.[82] Upon reflection, this need not mean that Egyptian sea power was in decline during the Middle Kingdom, but rather that the king's ability to use maritime forces was subject to the support of his provincial nobles. Without support from the majority of the nobles, the king would have been unable to project military power against Egypt's neighbours, to maintain Egypt's frontiers or even to avoid internal rivals usurping the kingship.

Two of Meketra's yacht models as seen in the Egyptian Museum, Cairo

The collection and transportation of grains, livestock and other primary produce, as well as the redistribution of status goods, including wines and oils, were essential activities for the control of the Egyptian state, from at least the time of its earliest kings.[83] The whole basis of royal power and the system of government in Pharaonic Egypt was very dependent on the ability to tax in kind by collecting and redistributing resources. Egyptian cargo ships were essential to the everyday sustenance and stability of the Egyptian state.

Old Kingdom cargo ships, were similar in construction to the travelling ships, but with relatively lower hulls and broader bottoms. The greater part of the cargo was placed on deck or inside a papyrus or straw deckhouse or enclosure for greater protection during transit. Depictions of cargo stacked upon the deckhouse was an artistic device to incorporate all the cargo in the picture, and is not evidence for overloading. As many Egyptian boats were built from sewn planks without a keel, they would potentially spring apart if subjected to too large an internal load. To prevent such a failure, a thick rope was tied around the upper part of the gunwale to form a girdle-truss. By the New Kingdom, cargo ships had more rounded, spoon-shaped hulls with plank keels, a large steering oar, and large rectangular deckhouses covered with straw mats. Although most cargo ships are depicted with sail, this probably results from the tendency to show cargo boats tied up ashore or at a mooring post, engaged in loading or unloading activities. A number of cargo ships are drawn underway sailing, while a few others also include a collapsible mast amongst the cargo.

Larger cargo vessels were also critical for the major construction projects of Pharaonic times. One Old Kingdom scene shows two granite columns with palmette columns being transported by a cargo ship, approximately 15m long. Another cargo ship is shown transporting a granite sarcophagus and its lid. The transportation of large stone architectural features was a mammoth task that involved a fleet of large and strong cargo vessels being built, operating, maintained and replaced on and off for thousands of years.

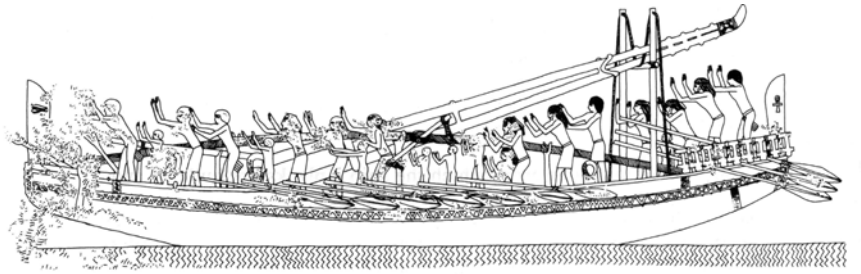
The largest recorded cargo ships were barges used to transport the obelisks required for the New Kingdom temple at Karnak at Luxor.[84] The two obelisks depicted would have been similar to those now preserved there, each of which is 30m high and weighs about 350 tonnes. Reconstructions of the obelisk barges vary, but one version has two obelisks being transported on a single obelisk barge: length 63m, beam 25m, height amidships 6m, draught 2m, thickness of planking 30cm, deadweight 800 tonnes, and displacement under load 1500 tonnes. The barge is depicted being towed by 30 travelling boats, each of which is rowed by around 30 oarsmen. The progress of this massive cargo vessel being towed by such a flotilla of travelling boats, with 900 men rowing, would have been an amazing sight; one which, although essentially for peaceful purposes, would have been an excellent visual signifier of Ancient Egyptian sea power.

Seagoing Ships

While travelling boats were ideal for use along the Nile, they were limited in their ability to navigate Egypt's adjacent seas. Sea voyages put much higher demands upon a vessel's strength and seaworthiness. However, inter-regional trade did occur during the Egyptian Predynastic period if not before. The presence of Syrian pottery, imported stone tools and metals, and the remains of Lebanese cedar confirm the existence of maritime trade links between Egyptian and Syrian communities well before the formation of the Egyptian state around 3050 BCE.[85] However, the earliest depictions of seagoing ships that provide information on Ancient Egyptian ship technologies are dated to the beginning of the 5th Dynasty during the Old Kingdom, c. 2500 BCE.

Fragmentary reliefs from King Sahura's Temple depict a fleet of seagoing ships returning from an expedition, while the number of Syrians onboard suggests the ships had sailed the Mediterranean to Byblos or some other destination in Syria.[86] Sahura's ships were over 17.5m long, 4m wide, with a draught of approximately 1m and an average plank thickness of 10cm.[87] The ships had either 14 or 16 oars for propulsion, six steering oars, a bipod mast for a trapezoid sail and an anchor. There were at least four ships in the fleet and each ship was crewed by approximately 20 people made up of Egyptians, Syrians and perhaps other maritime peoples.[88]

The seagoing ship hulls were long and slender with pointed ends, which provided greater stability in relatively high seas, while the hull strength was improved by using a girdle-truss. However a girdle-truss could not provide longitudinal strength to a seagoing ship, for that purpose a hogging-truss was required.[89] Ancient Egyptian mariners developed a hogging-truss – a thick rope connecting the fore and aft parts of a ship to increase the vessel's longitudinal strength – especially to overcome this problem.[90] As such Sahura's seagoing boats reveal the high level of sophistication of early Egyptian ship construction techniques.



A seagoing ship from the reign of King Sahura

Old Kingdom records reveal that the earliest seagoing ships were referred to as 'Byblos ships'. It is possible that the technical modifications were incorporated into the standard design of the Egyptian river vessels after visiting Byblos and learning their techniques, but it was equally as likely that the Egyptians modified their ships themselves especially for the Byblos run. The records show that Byblos ships were also used for travel in the Red Sea.[91] As maritime communications between Egypt and Byblos had already been strong for some time before the evidence of the seagoing ship, it is most likely that the modifications were a combination of many smaller initiatives adopted by mariners from both regions.

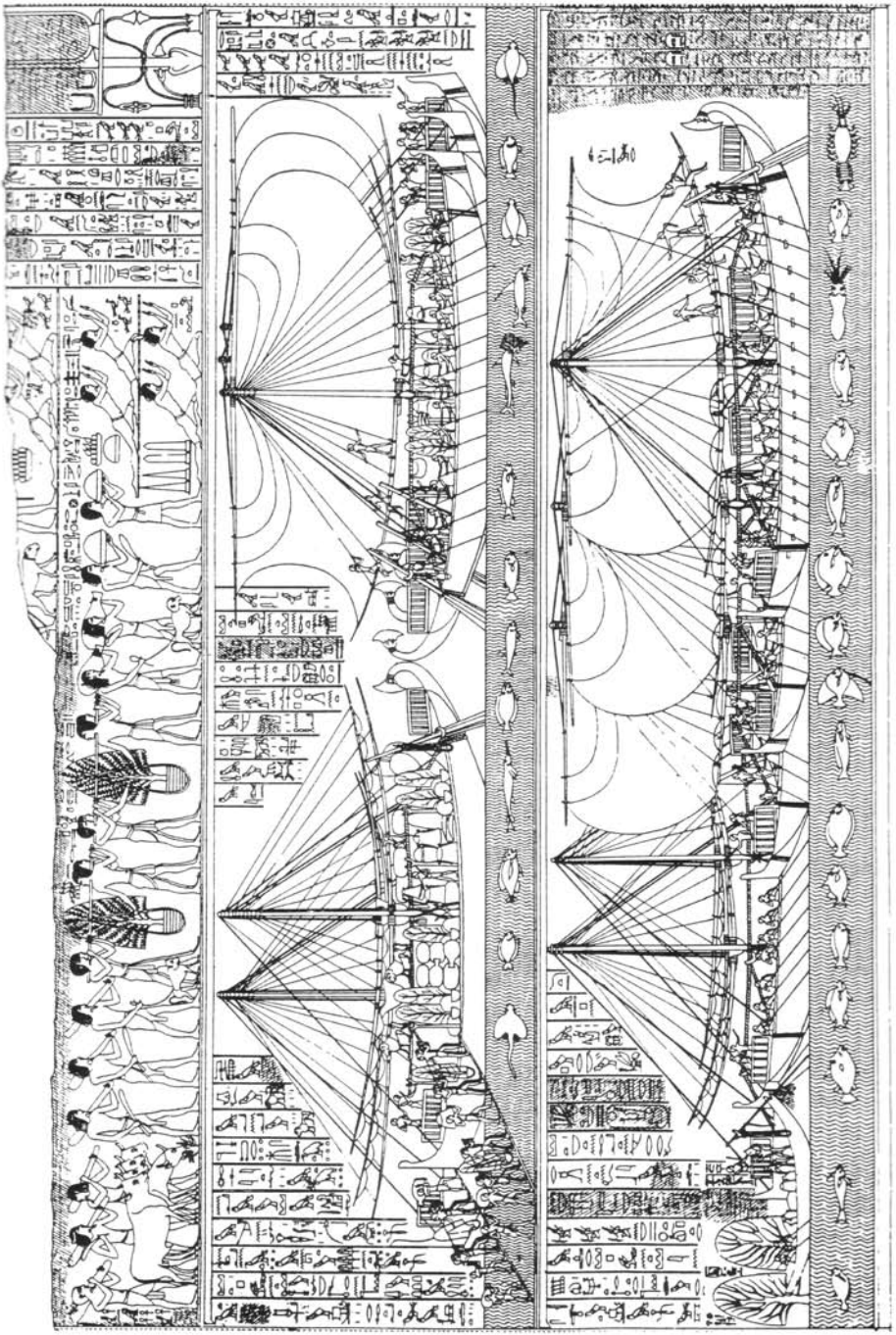
The reliefs of Queen Hatshepsut's expedition to Punt (c. 1460 BCE), found in her funerary temple at Deir el Bahri, provide some of the clearest evidence for seagoing ships of the New Kingdom.[92] The reliefs portray eight ships arriving at Punt, loading cargo, and departing Punt for their return journey on the Red Sea. The Punt ships were similar to other New Kingdom travelling ships, except they were much more streamlined, with deeper draughts and with hogging-trusses in place to counter the rougher waters of the Red Sea. They had raised fore and aft platforms (castles), protected by screens, that were used as platforms for ship commanders, lookouts and marines. These ships have been described by some scholars as trading galleys built for fast voyages in dangerous waters.[93] Using the reliefs as a guide, the Punt ships would have been about 25m long and 2.6m wide, crewed with 30 rowers and perhaps eight additional crew members.

Warships

It is difficult to distinguish Ancient Egyptian warships from travelling ships and seagoing ships as there was essentially no difference between ships used for transportation, trade and military activities. The earliest prehistoric war-canoes could be used for peaceful activities as well as for war. Their successors, the wooden travelling ships of Pharaonic times, could equally be used for all functions ranging from peace to war, while Egyptian seagoing ships were unlikely to have survived for long in the neighbouring seas without some military presence onboard. An Ancient Egyptian warship was a fully manned and armed version of the common ship types.

In order to understand better the technologies of warships it is necessary to examine the few representations of naval battles from Ancient Egypt. Pharaonic artistic conventions in sacred and funerary contexts avoided depicting scenes of chaos because they were believed to promote chaos in the afterlife. Chaotic scenes were only revealed outside such cosmic spaces, such as on the outside of temple walls or in those parts of a tomb

Opposite: Queen Hatshepsut's expedition to Punt

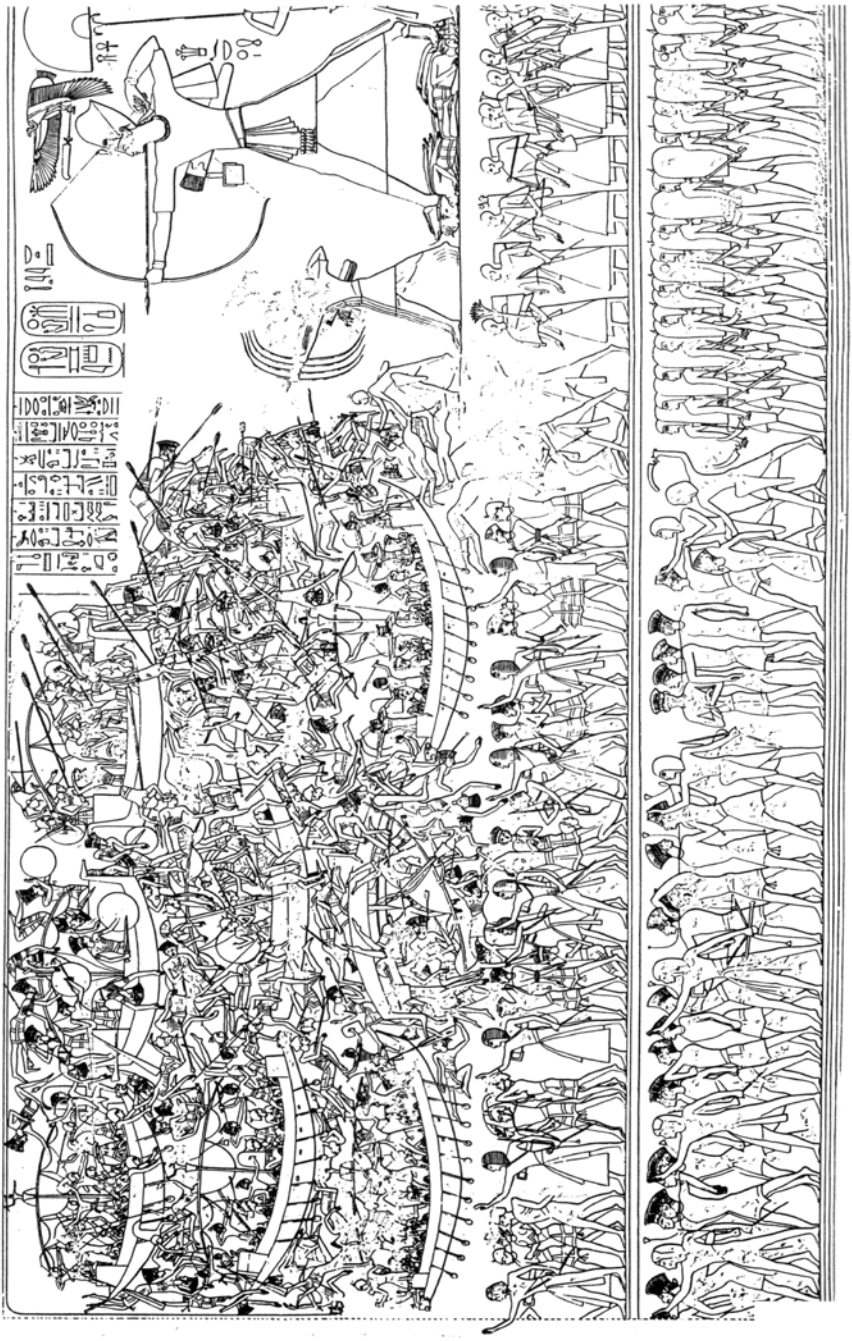


that are profane spaces. The only surviving representations of naval battles show the king overcoming his chaotic enemies and are dated to times of instability. The Predynastic war-canoes depicted on the Gebel el Arak knife handle are of the same form as other prehistoric war-canoes depicted in more peaceful surroundings. A scene from the First Intermediate Period tomb of Intef at Thebes has marines armed with either bows or hand-axes and shields fighting from three small travelling ships. Each ship was only about 8m long but they carried between 15 and 23 crew members. Bowmen on these ships were specialists who were very effective troops to employ at distance against other ships or against small parties attempting to land along the banks of the Nile. Small highly motivated units such as these could have wreaked havoc during the First Intermediate Period, raiding up and down the Nile. Such activities were not possible during periods of stable central government, such as the Old Kingdom, when the royal maritime forces were strong enough to prevent such raiding.

The other main depiction for warships in Pharaonic times comes at the end of the New Kingdom, with a naval battle scene on the temple of Rameses III at Medinet Habu, on the western bank at Thebes.[94] The scene depicts the naval battle as having a fleet of five warships belonging to the Sea People being attacked by four Egyptian warships with Egyptian troops, including the king, supporting their ships from ashore.[95] One of the Sea People's warships is shown upside down, a variation of the standard artistic representation of a defeated enemy; in this instance the enemy is replaced by the warship itself. The chaotic images of the Sea People are countered by the regular symmetry of the Egyptians in what was also meant to be a symbolic representation of the victorious forces of order (the Egyptians) defeating the forces of chaos (the Sea People). Grappling hooks were thrown into the opponents rigging, then warships backed away in an effort to capsize their opponents.[96] Despite such efforts, fighting at sea remained essentially similar to fighting on land: a combination of archers attempting to wear down the number and morale of their opponents, and boarding parties engaged in hand-to-hand combat attempting to overpower the crew of enemy warships.

The Egyptian warships shown in Rameses III's naval battle are highly conventionalised. They had an overall length of 25m and a width of 4.5m. They were fitted with loose-footed sails, single pole masts with lookout positions on the mast-heads, a single steering oar attached to a stern post and a parapet running along the sides for up to 17 oarsmen on each side. The sails were furled on the upper yard to give room for action on the deck. The lengths of the Egyptian warships were accentuated by having extended bows and sterns.

Opposite: King Rameses III's naval battle from Medinet Habu



The bows were each decorated with a lion's head with the head of a Syrian in its mouth.[97] Raised platforms were provided fore and aft for use by the warship crew. The deck of the warships needed to be wide enough to allow movement of armed troops onboard without affecting those rowing. The Egyptian warships show captured Sea People on their decks. The Sea People's warships were similar to the Egyptian ones, although they were shown with raised stem and stern posts, the stems being decorated with bird heads. It is possible that many of the technical innovations seen in the Egyptian warships may have been introduced after contact with the first Sea People. The Egyptians were adept in applying new nautical technologies wherever they could see a practical advantage in their maritime environments, whether or not the ideas originated from Egyptians or from someone else.

The largest fleets operated during times when the Egyptian royal power was at its greatest. The royal authorities obtained the strongest wooden materials and then constructed and maintained the greatest number of large ships possible within the limits of their technology. Prior to the formation of the Egyptian state or during the First, Second or Third Intermediate Period, the maritime forces of the regional kings and/or local warlords did not rival the royal fleet in size or numbers, but it was the absence of just such a royal fleet that allowed these regional powers to utilise maritime forces to achieve their aims without interference from a central authority.[98]

During the Egyptian Predynastic period, the regional kings assembled maritime forces numbering from 1000 to 2000 troops, on between 20 and 50 war-canoes. From Early Dynastic times to the end of the Middle Kingdom, the size of royal maritime expeditions were in the order of 2000 to 4000 troops.[99] This is based upon a fleet of 40 to 80 travelling ships, each 50m long and carrying 50 men. This would be the maximum size manageable for an Ancient Egyptian fleet at anytime during the Pharaonic period. During the New Kingdom, it is possible that more than one royal fleet of between 40 and 80 ships could have existed; however, the resources necessary to support such a large number of ships, including ship construction, logistics and personnel, would have been too great to support such ship numbers over any extended period of time.[100]

The size of maritime forces underpin all applications of sea power in Ancient Egypt, and it is necessary to remember that the forces involved did not typically exceed 4000 men. The influence on historical events of such small, efficient and flexible maritime forces was far greater than might otherwise be expected. As proponents of modern maritime strategy understand, the characteristics of maritime power have always meant that, when effectively employed, maritime forces are capable of providing great strategic effects for a relatively small investment in resources.[101] The operations of the Ancient Egyptian maritime forces suggest that these characteristics of maritime power have held for at least the last 5000 years.

CHAPTER 5 — ANCIENT EGYPTIAN MARITIME OPERATIONS

Until quite recently, most of the world's navies did not feel it was necessary to explain what they did, they just went out and did what was necessary. However, it has become clear that as ships become bigger and more automated, and the number of mariners decrease, subsequently there are fewer and fewer naval practitioners left to explain the roles of navies or more broadly the roles of maritime forces. Thus a number of scholars have developed models explaining these roles.[102] Naval practitioners, in turn, now describe the overarching roles of maritime forces within their maritime doctrine.[103] These roles may be characterised as military (or combat related), diplomatic (or foreign policy related) or constabulary (or policing and nation building related). Specific maritime operations may in practice combine one or more of these roles depending upon circumstances, although the individual tasks that underlie a maritime operation would typically be military, diplomatic or constabulary in nature. Not all maritime tasks that are theoretically possible are undertaken by a specific maritime force at any one time or place, as the actual tasks undertaken by maritime forces will depend upon many factors, including the states' maritime geography, economy, population, technological infrastructure, seaborne trade, strategic environment, foreign policy, history, political system and political will. Appendix 2 is included at the end of this study to provide additional information for those who are not familiar with modern maritime roles and tasks.[104] This study examines the applicability of the current explanatory model for the roles of maritime forces, to the maritime forces of Ancient Egypt measured over several thousand years. The purpose is to understand better the enduring aspects of maritime power by utilising an example, distant culturally as well as distant in time.

The maritime forces operated by the Egyptian state were not challenged by any other state's maritime forces throughout Pharaonic times. They were in effect the major if not the only naval power in the Eastern Mediterranean and the Red Sea. Even such potential rivals as the Syrians, Minoans or Myceneans, made up of loose coalitions of city-states, were not capable of sustained maritime operations against the powerful territorial state that was Egypt. Thucydides suggested that a Minoan thalassocracy under King Minos may have existed at around this time, but this cannot be supported.[105] Although Minoan cities did have some ability to assemble maritime forces and were particularly involved in Eastern Mediterranean trade, they did not have the economic power to challenge the Egyptian fleet for maritime supremacy. In what would today be labelled a unipolar maritime circumstance, the Egyptians did not have to contend with a powerful maritime opponent and hence had effective sea control by default, rather than

through any planned campaign to achieve maritime supremacy.[106] Many of the modern sea control tasks involving operations against enemy forces were not relevant to the Ancient Egyptians. Nevertheless Ancient Egyptian military tasks did include operations in defence of Egypt, as well as a surprising number of actual naval battles.

The potential for smaller city-states and non-state warlords to disrupt Egyptian maritime trade did exist and as such they were in an ideal position to attack any unprotected Egyptian commerce. Thucydides describes the rise of piracy in the Eastern Mediterranean, and this is supported by the story of the Egyptian official Wenamun of the late New Kingdom, which clearly shows the level of state and non-state resistance to Egyptian trade that could appear whenever the level of Egyptian maritime power was low and when threats of Egyptian retaliation were indeed hollow.[107] Maritime trade protection was an important military task for the Ancient Egyptian maritime forces.[108]

As one would expect when the operations of a unipolar maritime power are considered, the ability to influence events ashore for political and economic benefit was paramount in the application of Ancient Egyptian sea power. Maritime power projection was one of the most important, as well as one of the most prestigious activities that an Egyptian king could undertake. Like many other rulers of maritime chiefdoms or smaller maritime city-states, the prehistoric rulers of Egypt concentrated on raiding and trading. Such activities were frowned upon by the kings of the centralised Egyptian state, unless the use of maritime power was directly beneficial to the Egyptian king or his territorial state. The Egyptian kings sent royal expeditions to foreign lands to defeat the enemy, take captives, loot property and gain glory and fame for their own rule. The Punt expedition of Queen Hatshepsut is one example of Egyptian maritime power projection.[109] The maritime expedition is a special form of military task, involving philosophical concepts of sea control as well as maritime power projection. Expeditions are also by their very nature distant, self-contained, limited in aim, of short duration, against varied opponents, demanding and specialised, fought in the littorals, as well as highly politicised.110 Ancient Egyptian maritime forces, assuming sea control, used expeditions to project military power ashore. Other Ancient Egyptian military tasks include the maritime mobility, and logistics and supporting land forces during civil war. The civil war task is not normally included in modern discussions of maritime tasks, but as the use of maritime forces have been demonstrated to be extremely effective in support of counterinsurgency operations and against foreign powers in expeditionary operations, they would be equally effective against internal enemies during civil war.[111]

Database of Ancient Egyptian Maritime Operations

A database of the major Ancient Egyptian maritime operations, developed as part of this study, is attached in Appendix 1. The database provides brief summaries of Ancient Egyptian maritime operations that may be examined to verify or reject the applicability of modern concepts of maritime operations and tasks. They help enrich our understanding of the application of sea power in the culturally and temporally remote case study that is Ancient Egypt.

Before discussing listed maritime operations, it is necessary to provide explanatory notes on the *Database of Ancient Egyptian Maritime Operations* found in Appendix 1. The database itself includes all major operations conducted from late prehistoric times to the end of the New Kingdom, arranged in chronological order. Although it is possible to add additional operations, which may be inferred from less firm evidence, their inclusion would not have added much to the study. This does not mean that our interpretation of the listed operations as 'maritime' is generally accepted; indeed it is anticipated that some of the operations may be rejected by other scholars.

While a chronology of Ancient Egypt has been included in the introduction to this study, the names of specific kings have also been included in the database.[112] The maritime forces operated in several regions. For the purposes of this study the regions have been separated into the Egyptian Nile, from the Delta to Aswan; the Nubian Nile, south of Aswan; the Red Sea; and the Mediterranean Sea. Each maritime operation is then classified in terms of the modern span of maritime tasks as military, diplomatic, or constabulary. The type of maritime force involved is listed. Whenever an estimate is provided it is followed by a question mark. The comments section briefly summarises the operation itself. The main sources for each operation are listed for further reference if required, while the abbreviations used in the sources may be found towards the beginning of this study. As mostly primary sources are listed, the reader may need to refer to a more general secondary source, such as Ian Shaw's *The Oxford History of Ancient Egypt*, for background knowledge. In addition, the nuances of transliterating a language that is no longer spoken and uses hieroglyphic signs to convey phonetic and ideolographic sense, means that Ancient Egyptian words may be spelt in a variety of ways when transformed into the English language. To minimise different transliterations the *The Oxford History of Ancient Egypt* is used as a benchmark.

For readers who would like to investigate Ancient Egyptian military operations from a more traditional 'continental' perspective, the following works are recommended – Robert Partridge's *Fighting Pharaohs* and Bridget McDermott's *Warfare in Ancient Egypt*. The scholarly works by William Hamblin *Warfare in the Ancient Near East to 1600 BC* and Anthony Spalinger *War in Ancient Egypt* are particularly useful, as is the classic

work by Y. Yadin, *The Art of War in Biblical Lands*.[113] The current study, although not the only collection of source materials on Ancient Egyptian military operations, is the only one that fully considers the military history from a maritime perspective.[114] As the title suggests, this study is indeed an examination of Ancient Egyptian sea power.

Queen Hatshepsut's marines on parade at Deir el Bahri

CHAPTER 6 — OPERATIONS IN HOME WATERS — THE EGYPTIAN NILE

The application of sea power on the Egyptian Nile was critical to the stability and existence of the Egyptian pharaonic state. In a time when Egypt had no territorial state enemies, control of the Egyptian Nile involved much more than the defence of Egypt. The maritime operations on the Egyptian Nile may be divided into the following four categories:

a. military operations at home against internal regional elites, warlords or chiefs

b. military operations at home against external raider/traders and defence against invader/immigrants

c. constabulary operations, mostly state building – but also border protection, peacekeeping and support to counterinsurgency

d. diplomatic trade protection operations.

Military Tasks

When the king's power was weak, the central government was also weak and Egypt tended to disintegrate into regional centres or nomes, led by rival kings, warlords or regional elites.[115] The centralised Egyptian state was a forced artificial construct that was held together by the military power and prestige of the Egyptian king through his central bureaucracy; when this bureaucracy failed or the king's power waned, Egypt returned to its 'more natural' state of regional centres.[116] The formation of the Egyptian state was characterised by military conflict between the pre-state actors, the chiefs and city-state kings who controlled their own regional centres. They fought each other as raider/traders, until one predominated. The king of the regional centre at Abydos (Thinite nome) became the first king of the Egyptian state with a new centre at Memphis (near modern Cairo).

With the subsequent breakdown of the central government during the Intermediate periods, civil war operations became common, with rival kings fighting each other and regional warlords trying to gain power during the period of chaos. The Palermo Stone briefly records an unidentified king smiting the *Intyw* (enemies), while a second unidentified king smites an eastern tribe, the *Werka*. King Nynetjer is described as hacking-up the cities called *Shem-Re* and the 'House of the North'. King Khasekhemwy

of the 2nd Dynasty has left a record of his involvement in another Egyptian civil war, including 'the year of fighting and victory over the marsh-dwellers' and a body count of '47,209 dead enemies'. Khasekhemwy successfully reunited Egypt and his successors were to rule a relatively stable Egypt for another 500 years. However, the kingdom that had built the pyramids also ultimately collapsed: the Old Kingdom came to an end around 2160 BCE.

The First Intermediate Period is described as a time of chaos, when the central government under the Old Kingdom kings lost most of its power, and rival warlords and kings used the power vacuum for their own purposes. The tomb of Ankhtifi, a regional warlord from Mo'alla in Upper Egypt, describes his attacks against the people of Abydos, Thebes and Koptos:

> *The prince, count, seal-bearer of the king, sole companion, lector priest, overseer of the troops, overseer of the mercenaries, overseer of foreign lands, nomarch of the Edfu and Hierakonpolis nomes, Ankhtifi says: 'Horus brought me to the Edfu nome, for life prosperity and health, to re-establish it by my name. … When I sail to the Thinite nome against one who is ignorant of himself, I find the watchmen upon the walls, when I hasten to war. 'This woe!' says he the wretch.' …*
>
> *'Now, the overseer of troops of Armant came to say: 'Because you are a champion … fortresses …' I sailed downstream on the west bank of Armant. I found the entire Theban and Coptite nomes. They had seized the fortresses of Armant on the hill of Semekhsen. I approached because of it. I stood up, with powerful are … there, like a dagger upon the nose of a hippopotamus which is fleeing. I sailed upstream to demolish their fortress with the strong troops of Hefat (Mo'alla). I am a champion without equal. …*
>
> *I sailed downstream with my trusty and strong troops. I landed on the west of the Theban nome, the van of the fleet on the hill of Semekhsen, the rear of the fleet in the domain of Tjemy. My trusty troops seeking a fight throughout the west of the Theban nome. Those who feared it, did not go forth. I sailed downstream, I landed on the east of the Theban nome, the rear of the fleet at the tomb of Imbi, the van of the fleet at Shay-sega. I lay siege to its walls. It bolted the door bolts on account of it in fear. These were my strong and trusty troops.*[117]

Although quite rare, several sea battles against internal enemies are recorded. The tomb of the noble Tefibi at Assyut has a fragmentary inscription describing a sea battle during the civil wars of the First Intermediate Period:

> *The first time that my soldiers fought with the southern nomes, which came together southward as far as Elephantine and northward as far as …, they smote them as far as the southern boundary. … the west side. When I came to the city, I overthrew the foe … I drove him … as far as the fortress of the port of the South. He gave me land, while I did not restore his town … I reached the west side, sailing upstream; there came another, like a jackal … with another army from his confederacy. I went out against him with one … There was no fear … He hastened to battle like the light; the Lycopolite nome – like a bull going forth … forever. I ceased not to fight to the end making use of the south wind as well as the north wind, of the east wind as well as the west wind … he fell in the water, his ships ran aground, his army were like bulls, … when attacked by wild beasts, and running with their tails to the front. … fire was put … I drove out rebellion by …, by the plan of Wepwaet, … of a mighty bull. When a man did well, I placed him at the head of my soldiers … for his lord … Herakleopolis. The land was under the fear of my soldiers; no highland was free from fear. If he made … fire in the southern nomes.*[118]

The civil wars continued in the time of another noble, Khety I, the son of Tefibi, who describes one of the campaigns:

> *You (the god) did convey him (the king) up-river, the heaven cleared for him, the whole land was with him, the counts of Middle Egypt, and the great ones of Herakleopolis, the district of the queen of the land, who came to repel the evil-doer. The land trembled, Middle Egypt feared, all the people were in terror, the villages in panic, fear entered into their limbs. The officials of Pharaoh were a prey to fear, the favourites to the terror of Herakleopolis. The land burned in its flame … never was the front of a fleet brought into Sheshotep, while its rear was still at … they descended by water and landed at Herakleopolis. The city came, rejoicing over her lord, the son of her lord; women mingled with men, old men and children.*[119]

Khety I does not inform us of any great battle; he describes a maritime security operation, which sounds more like a constabulary task where the fleet was used as a peacekeeping force and to support counterinsurgency operations. Elsewhere Khety I describes how he helped to restore a temple on behalf of the Herakleopolitan king. The transportation of building blocks by ship as well as the fleet support for labour and provisions were in effect constabulary state building tasks.

Nearby Khety I's tomb is that of another Assyut noble Khety II, who may have been related to the first Khety. Khety II declared that he 'secured the borders …' before he describes his army and fleet.

> *I was one strong with the bow, mighty with his sword, great in fear among his neighbours. I made a troop of soldiers … as commander of Middle Egypt. I had goodly ships, … a favourite of the king when he sailed up-river.*[120]

It can be inferred that Khety II was a regional warlord in support of the weakened Herakleopolitan king. Khety II was the one who provided the royal ships for the king's visit. As the Theban kings such as Intef I and Mentuhotep I grew stronger, they were able to assemble maritime forces that helped form a new Middle Kingdom dynasty capable of reconquering Egypt. King Intef I attacked the Herakleopolitans and captured the Thinite nome:

> *… her northern boundary as far as the nome of Aphroditopolis. I drove in the mooring-stake in the sacred valley, I captured the entire Thinite nome, I opened all her fortresses, I made her the Door of the North.*[121]

A statue of King Mentuhotep I, from Gebelein, depicts him reunifying Egypt.

> *Binding the chiefs of the Two Lands, capturing the South and the Northland, the highlands and the two regions, the Nine Bows and the Two Lands.*[122]

The Theban conquest of Egypt does not specifically mention the use of maritime forces, but it would be impossible for the Theban kings to reunify Egypt without the use of an Egyptian fleet of their own.

The early rulers of the Middle Kingdom needed to put down some rebellious elements within Egypt. The tomb of Khnumhotep from Beni Hasan describes how he accompanied King Amenemhat I during a campaign against a rival king.

> *I went down with his majesty to … , in twenty ships of cedar which he led coming to … he expelled him from the two regions (Egypt). Nubians, Asiatics, fell: he seized the lowland, the highlands, in the two regions … with the people … remain in their positions … .*[123]

Once the few rebellions had been crushed, the Middle Kingdom period once again became a time of order and stability, with strong central power and few reasons for internal conflict. However, one threat appeared during the Middle Kingdom: the infiltration of neighbouring peoples. There is a literary source that refers to a conflict with the nomadic people of Libya: the 'Tale of Sinuhe' starts with King Senusret I campaigning against the Libyans on the western fringes of Egypt. Although this is often interpreted as taking place in Egypt's Western Desert, it is likely that the conflict occurred along the fertile edges of the western Delta and was against a group of invader/immigrants who had settled on Egypt's margins.[124] This was an early example of the invader/immigrant threat that was to become all too familiar to the Egyptians of the Second Intermediate Period and later.

During the First Intermediate Period the civil wars were between Egyptians themselves, but the Second Intermediate Period saw foreign forces working as allies or rivals to the Egyptian regional rulers. Importantly these foreign forces were not like their modern equivalents of state-based military forces, they were groups of raider/traders sent out from foreign city-states or chiefdoms who, like the Egyptian warlords, were intent on gaining from the collapse of Egyptian state power.[125]

The Second Intermediate Period and the rise of the New Kingdom followed a similar trajectory to that of the First Intermediate Period, although the foreign element played a central part. At the end of the 13th Dynasty, the Egyptian rulers were attempting to prop up the state by dramatic shows of maritime power, however, the size of their sea power was diminished. The story of Horemkhauf's journey to Memphis during the 13th Dynasty, to bring statues of the gods Horus and Isis back with him to Hierakonpolis, was clearly a major event in his life.[126] This should be compared with Ikhernofret's state building activities during the 12th Dynasty, where he constructed a divine bark and conducted the 'Osiris mysteries', which included a sham combat.[127] Both activities used a maritime force to emphasise the stability and power of the Egyptian king and by association the king's exclusive power to communicate with the gods.

The Middle Kingdom had strong trade connections with the peoples from the Eastern Mediterranean. During the later part of the 13th Dynasty an increasing number of these traders, most likely from the city-states of Syria, settled in the eastern Delta especially in the city of Avaris. The archaeological evidence supports this shift in population;

however, as the power of the 13th Dynasty rulers declined, these newcomers to the eastern Delta declared themselves local kings, independent of the Egyptian king at Memphis. These 15th Dynasty kings are sometimes referred to as the Hyksos invaders, although there is no evidence that they arrived in Egypt as part of a foreign invasion. Avaris had become central to the control of the sea and overland trade routes into and out of Egypt. As the first major city encountered by those entering the eastern Delta, Avaris was the prime location for a naval base with associated ship construction and harbour facilities.[128] The power of the 15th Dynasty rulers increased their control beyond the eastern Delta region until they controlled the Egyptian capital Memphis and much of Middle Egypt. No records exist of the Hyksos capture of Memphis and it may have been a peaceful takeover; however, it is safe to assume that the Hyksos and their Egyptian allies could not have controlled their domains in the north of Egypt without an Egyptian fleet.

The rise of the 17th Dynasty kings at Thebes, was a case of *déjà vu* for, after much fighting, the Theban kings led a series of campaigns downstream along the Egyptian Nile to defeat the Hyksos and their Egyptian allies. Civil war predominated and maritime forces were used by both sides to gain power over their rivals. King Kamose of the 17th Dynasty left a record of his campaigns against the Hyksos, including a raid on Memphis:

> *The mighty king in Thebes, Kamose, given life forever, was the beneficient king. It was Ra himself who made him king and assigned him strength in truth. His majesty spoke in his palace to the council of nobles who were in his retinue: 'Let me understand what this strength of mine is for! There is one prince in Avaris, another in Sudan, and here I sit associated with an Asiatic and a Negro! Each man has his slice of this Egypt, dividing up the land with me. I cannot pass by him as far as Memphis, the waters of Egypt, but now, he has Hermopolis. No man can settle down, being despoiled by the demands of the Asiatics (Hyksos). I will grapple with him, so that I may cut open his belly! My wish is to save Egypt and to smite the Asiatics! …*
>
> *I went north because I was strong enough to attack the Asiatics through the command of Amon, the just of counsels. My valiant army was in front of me like a blast of fire. The troops of the Medjay (Nubian archers) were on the upper part of our cabins, to seek out the Asiatics and to push back their positions. East and west had their fat, and the army foraged for things*

everywhere. I sent out a strong troop of the Medjay while I was on the day's patrol … to hem in.

… Tety, the son of Pepy, within Nefrusy. I would not let him escape, while I held back the Asiatics who had withstood Egypt. He made Nefrusy the nest of the Asiatics. I spent the night in my ship, with my heart happy. When day broke, I was on him like a falcon. When the time of breakfast had come, I attacked him. I broke down his walls, I killed his people, and I made his wife come down to the riverbank. My soldiers were as lions are, with their spoil, having serfs, cattle, milk, fat, and honey, dividing up their property, their hearts joyful. The region of Nefrusi was something fallen; it was not too much for us before its soul was hemmed in.[129]

Having defeated an Egyptian ally of the Hyksos, King Kamose raids the Hyksos city of Avaris:

I moored at Perdjedken, my heart was joyful, for I caused Apophis to see a miserable time. The chief of the Retjenu (Asiatics), weak of arms, who plans much in his mind but they did not happen for him. I arrived at the depot of the south. I crossed over to them to question them. I commanded the fleet assembled one behind the other. I put the prow of one at the rudder of another, with my bodyguard, flying upon the water like a falcon. My own ship of gold at the head of it. I was like a divine falcon in front of them. I set a valiant mek-ship probing towards the river bank, a djat-ship following it, like a kite ravaging the territories of Avaris. I saw his women on top of his house, looking from their windows to the riverbank, without revealing their bodies. When they saw me, they looked with their noses upon their wall, like the young mice in the interior of their burrows, saying 'it is the attack'. I have arrived, I am successful, the rest of Egypt is with me, my deeds are effective. As the mighty Amon endures, I will not endure you. I will not allow you to walk in a field, without me being upon you. May your heart fail, oh vile Asiatic. Now, I will drink the wine of your vineyard, namely that which the captive Asiatics, will press for me. I shall hack-down your dwelling-place. I will cut down your trees, after I have deposited your women in the ship's holds. I captured the chariotry. I have not left a plank

> *on the 300 ships of new cedar, without being filled with gold, lapis lazuli, silver, turquoise, and countless bronze axes, apart from oil, incense, fat, honey, itwrn wood, red timber, spny wood and all their precious wood. All the good tribute of Retjenu, I took away entirely. I did not leave a scrap of Avaris because it is empty, with the Asiatics ruined.*[130]

Kamose returns to Thebes in victory:

> *I sailed south in strength and joy. I destroyed every rebel who was on the way. Oh what a good journey south for the ruler! – given life, prosperity and health – with his army at his front. They had suffered no loss. No man inquired about his fellow. Their hearts did not weep. When I moved slowly to the district of Thebes during the inundation season, every face was bright, the land was affluent, the riverbank was a scene of excitement, Thebes was in festival.*[131]

Kamose's raid destroyed the Hyksos fleet, and wood that could be used to construct a replacement fleet was also taken by the victors.

The reconquest of Egypt was completed by the first king of the 18th Dynasty, King Ahmose. One of his ship captains, Ahmose (son of Ebana) has left a detailed description of the maritime campaign that led to the capture of Avaris and the expulsion of Hyksos kings of the 15th Dynasty.

> *Ship's captain, Ahmose (son of Ebana) true of voice, he says: 'I say to you all people, I will cause you to know the favours that happened to me. I was rewarded with gold seven times in the presence of the entire land, with male and female servants likewise, and I was endowed with very many fields. The fame of the brave is in that which he did, it will not perish in this land forever.'*
>
> *He speaks as follows: 'I grew up in the town of Nekheb (el Kab). My father was an officer of the King of Upper and Lower Egypt Sekenenra, true of voice, Baba son of Royenet was his name. Then I served as an officer instead of him on the ship The Fighting Bull in the time of the lord of the two lands Nebpehtyra (Ahmose I), true of voice, while I was still a youth, before I had a wife, and while I was sleeping in a hammock. Then after I*

> *established a household, I was transferred to the northern fleet because I was brave. I followed the king on foot when he travelled in his chariot. When one besieged the town of Avaris, I was courageous on foot in front of his majesty. Then I was promoted to the ship 'Appearing-in-Memphis'. Then one was fighting upon the water in the canal of Avaris. Then I captured and I brought a hand, and this was reported to the royal herald. Then one gave to me the 'gold of valour'. When the fighting was repeated in this place, I made a capture therein, a second time, and I brought a hand. Then one gave to me the 'gold of valour' a second time. Then one was fighting in the part of Egypt south of this town, and I brought as a living captive, one man. I went down to the water because he was brought in as a captive upon the side of the town. I crossed carrying him over the water, and it was reported to the royal herald. Then I was rewarded with gold another time. The one captured Avaris and I brought plunder therefrom: one man, three women, a total of four heads. Then his majesty gave them to me as slaves.'* [132]

King Ahmose rebuilt Avaris, including a new waterway and citadel, consolidating his hold on the eastern Delta trade routes and the city remained an important entry-port for the early part of the New Kingdom, at least up to the reign of King Thutmose III. But the defeat of the Hyksos was not enough for King Ahmose. He also had to defeat a rebellion amongst some of the Egyptians. Ahmose(son of Ebana) continues:

> *Then Aata (a rebel leader) came from the south, his fate brought on his doom. The gods of Upper Egypt seized him. He was found by his majesty in Tent-taa. Then his majesty brought him as a living captive and all his men as easy prey. Then I brought two young recruits as captives from the ship of Aata. Then one gave to me five persons and a share of field being 5 aroura in my city. It was done for the whole crew likewise. Then that enemy came, Tetyan (another rebel) was his name. He collected to himself the disaffected persons. Then his majesty slew him and his gang was as those who did not exist. Then, three persons and a field of 5 aroura in my city, were given to me.* [133]

With the reconquest of Egypt, King Ahmose was able to establish a strong and secure centralised Egyptian government. The power of the New Kingdom rulers effectively blocked any internal disturbances for almost 500 years and New Kingdom maritime

Ahmose (son of Ebana) with his autobiographical inscription in his tomb at el Kab

forces were used to project power abroad rather than at home. In Egypt, it was the political and social breakdown towards the end of the 20th Dynasty, coupled with a series of infiltrations and/or invasions, which led to a new period of instability and internal conflicts: a period now known as the Third Intermediate Period.[134]

The 19th and 20th Dynasties saw an increase in the threat from foreign forces, in the form of invader/immigrants. The powerful military kings of Egypt opposed the infiltration of the invader/immigrants for over 250 years. Reliefs from the Temple at Karnak show King Sety I defeating Libyan invaders and like earlier Libyan invasions this campaign may have been fought in the western Delta. One interpretation is that the Egyptian maritime forces, along with mobile chariot units manoeuvred up and down

the western branches of the Nile to defeat any Libyan opposition, to destroy any Libyan settlements and to capture any Libyan people who had entered Egyptian territory. After this struggle the Libyans and Sea People often combined their efforts to infiltrate the Egyptian Nile Delta.

The earliest recorded action against the Sea People and the Libyans included a sea battle in defence of Egypt. Mention of a victory over the Sherden, one of the Sea People, is found in a fragmentary inscription from the reign of Rameses II:

> *He has captured the countries of the West, causing them to be as that which is not … Sutekh on his right, of the battle, King Rameses II. He has ferried over … come to him, bearing their tribute; his fear penetrates their hearts. The rebellious-hearted Sherden … them; mighty … warships in the midst of the sea … before them.*[135]

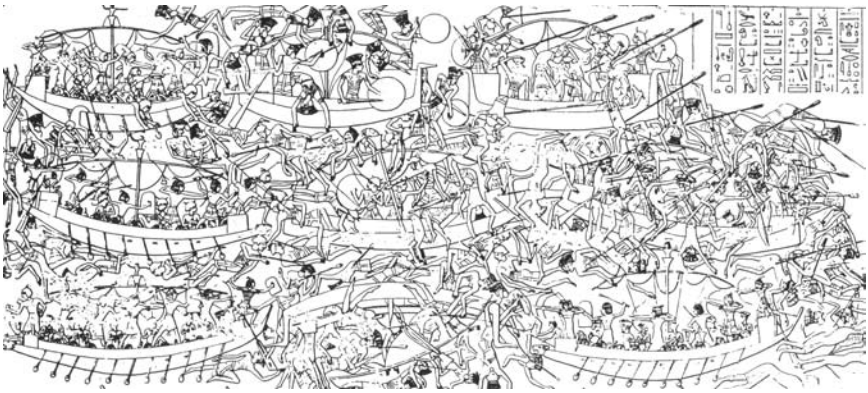
Elsewhere Rameses II boasts about his victories over the Libyans. He is known to have established an outpost along the North African coastline at Zawiyet Umm el Rakham, approximately 20km west of Marsa Matru and Rameses II's inscriptions refer to a campaign along this coast.[136] The fortress at Zawiyet Umm el Rakham was abandoned towards the later part of Rameses II's reign and his successor, King Merenptah, was confronted with a major invasion of the Nile Delta by Libyans and Sea People. The invasion route was along the Nile branches towards Memphis and a large part of the invading population may have already infiltrated Egypt with their families and animals even before their advance on Memphis. The invasion was a series of sharp combined maritime attacks along the western Delta branch of the Nile. Merenptah's attack, in the form of a coordinated maritime operation, defeated the advancing Libyans and Sea People and effectively safeguarded the capital, Memphis. It is also likely that many of the Libyans and Sea People may have remained in more remote parts of the Delta, either being resettled by the king in the east, or perhaps retreating to a location in the west where the Egyptian centralised government did not reach. Merenptah's records of the invasions shed some light on the maritime nature of the operation:

> *The wretched, fallen chief of Libya, Meryey, son of Dyd, has fallen upon the country of Tehenu with his bowmen … Sherden, Shekelesh, Ekwesh, Luka, Teresh, (all Sea People), taking the best of every warrior and every warship of his country. He has brought his wife and his children … leaders of the camp, and he has reached the western boundary in the fields of Perire. … infantry and chariotry in great number were camped before them on the shore in front of the district of Perire.*[137]

The Libyans and Sea People were still forces to be reckoned with, although it is possible that once the earlier invader/immigrants were defeated they were replaced by later invader/immigrant groups. Rameses III's sea battles in Ancient Egypt are brought into focus by the well preserved representation and record of a sea battle from the temple of Rameses III at Medinet Habu:

> *King Rameses III says: 'Now, it happened through this god, the lord of gods, that I was prepared and armed to trap them like wild fowl. He furnished my strength and caused my plans to prosper. I went forth, directing these marvellous things. I equipped my frontier in Zahi, prepared before them. The chiefs, the captains of infantry, the nobles, I caused to equip the harbor-mouths, like a strong wall with warships, galleys, and barges, … they were manned completely from bow to stern with valiant warriors bearing their arms, soldiers of all the choicest of Egypt, being like lions roaring upon the mountain-tops. The charioteers were warriors … , and all good officers, ready of hand. Their horses were quivering in their every limb, ready to crush the countries under their feet. I was the valiant, Montu, stationed before them, that they might behold the hand-to-hand fighting of my arms. I, King Rameses III, was made a far-striding hero, conscious of his might, valiant to lead his army in the day of battle.'*
>
> *Those who reached my boundary, their seed is not; their heart and their soul are finished forever and ever. As for those who had assembled before them on the sea, the full flame was in their front, before the harbour-mouths, and a wall of metal upon the shore surrounded them. They were dragged, overturned, and laid low upon the beach; slain and made heaps from stern to bow of their galleys, while all these things were cast upon the water. Thus I turned back the waters to remember Egypt; when they mention my name in their land, may it consume them, while I sit upon the throne of Harakhte, and the serpent-diadem is fixed upon my head, like Ra.*[138]

Rameses III's sea battle was a trap set to catch a raiding fleet of Sea People in narrow waters between the king and his archers ashore and an Egyptian fleet that attacked the Sea People from behind. Despite the influence of propaganda and artistic convention in the record for this action, this naval battle was what would today be termed action by maritime forces in the littorals.



King Rameses III's naval battle from Medinet Habu

Rameses III had to overcome at least two more invasions by the Libyans. These campaigns were most likely fought in the western Delta along the western branches of the Nile, although this is not clear from the surviving texts, which concentrate on the conflicts involving the Egyptian chariotry and infantry on land. It is also possible that, without the maritime forces provided by their Sea People allies, the Libyans became isolated and were unable to oppose the effective manoeuvre campaigns of the Egyptian maritime forces.

Constabulary Tasks

When assessing maritime operations in Ancient Egypt, the dividing line between the roles and functions of individual operations is not always clear-cut; but from our understanding of the external threat to Egypt, the so-called invaders were not in the form of an invading army. Rather, they most likely involved a large number of small incursions by raider/traders or immigrants. Such infiltrations in place of invasions are also known from other historical circumstances, such as the Viking invasions of Britain or perhaps even the North African migration into Southern Europe. For much of the Pharaonic period these incursions into Egypt were not large scale military defence operations but the constabulary tasks of border protection. When the Egyptian central bureaucracy was strong, the border protection measures were also strong. It is not surprising that the major foreign incursions occurred during the Second and Third Intermediate Periods, when Egyptian central control, sea power and border controls were at their weakest.

The southern frontier at Semna

Elephantine, near modern Aswan, was the fortified southern frontier post along the Egyptian Nile. Although the frontier and border controls moved south into Nubia when the Nubian Nile was brought under Egyptian rule, Elephantine remained the effective southern limit of Egypt proper. The clearest example of border protection comes from a stele found at the Middle Kingdom Nubian fort of Semna:

> *Southern boundary, made in the year 8, under the majesty of the King of Upper and Lower Egypt, Khakaura (Senusret III), who is given life forever and ever; in order to prevent that any Nubian should cross it, by water or by land, with a ship or any herds of the Nubians; except a Nubian who shall come to do trading in Iken or with a commission. Every good thing shall be done with them, but without allowing a ship of the Nubians to pass by Heh (Semna), going downstream, forever.*[139]

And:

> *Year 16, third month of the second season, occurred his majesty's making the southern boundary as far as Heh (Semna). I have made my boundary beyond that of my fathers; I have increased that which was bequeathed to me.*[140]

Egypt's northern borders were also guarded. The land route to Palestine, called the 'Horus Ways' by the Ancient Egyptians, was protected by a series of fortresses strung out from the eastern Delta city of Sile. But Sile would have also been a suitable place for a maritime frontier post, to prevent ships from entering the Egyptian Nile through its Pelusiac (or Eastern) branch. The western approaches to the Nile along the Rosetta branch were most likely protected by a frontier post, which was possibly situated in the vicinity of Kafr Esh Sheikh, perhaps at Buto.[141] The maritime defence of Egypt would have used these frontier posts with light forces to control shipping, while stronger maritime forces would have been stationed in the harbours of the major cities further along the Nile. In the south, frontier posts like Semna would have been supported by a fleet at Elephantine. In the eastern Delta, the frontier post at Sile could have been supported by a fleet at Avaris or later Per-Ramesse. In the western Delta, the frontier post at Kafr Esh Sheikh could be supported by a fleet at Sais. Unfortunately such details are not clearly stated in the surviving sources. The biography of Amenhotep from Thebes, under the reign of Amenhotep III, does provide some details of the border command:

> *I appointed all their troops, I levied … I placed troops at the heads of ways to turn back the foreigners in their places. The two regions were surrounded with a watch scouting for the sand dwellers. I did likewise at the heads of the river-mouths, which were closed under my troops except to the troops of royal marines. I was the guide of their ways, they depended upon my command.*[142]

The maritime defence of Egypt was based upon effective border protection, using frontier posts backed up by fleets in the south, east and west and, when required, supported by the main or reserve Egyptian fleet based at the capital, Memphis. The existence of a royal fleet at Memphis, at least during much of the New Kingdom, is supported by evidence from the royal dockyard.[143] The sea battles of Rameses II and Rameses III suggest that the king and this main fleet were required to defeat the Sea People threat during their reigns.[144]

The Egyptian Nile fleet was rarely employed in times of civil war, in defence of Egypt, or enforcement type constabulary tasks. Most of the time, the Egyptian maritime forces were employed to maintain the peace. The fleet was not kept tied up to mooring posts in the major harbours, as the Ancient Egyptians often used maritime forces in support of the state: in managing trade and customs duties, in transporting surplus products and prestige commodities where required within Egypt, in building projects to maintain the peace and also displaying the power of the Egyptian kings as a form of floating propaganda.

The massive pyramid complexes of the Old Kingdom were not only religious monuments for the resurrection of each Egyptian king, they were the physical embodiment of royal power.[145]

The construction of pyramids involved mining expeditions to the quarry sites, transportation of the stone blocks by ship and their manipulation from ship to shore and then to the temple construction site. Maritime forces were an essential element that provided manpower, expertise and the command skills required to support the construction of monumental architecture.

The vizier Weni, of the 6th Dynasty, records how King Pepy I gave him limestone blocks for his tomb:

> *I begged from the majesty of my lord that a sarcophagus of limestone be brought to me from Turah (south of Cairo). His majesty caused a seal-bearer of the god to cross with a troop of sailors in his charge to bring*

> *for me this sarcophagus from Turah. He returned with it in a great* s3t *barge of the court, with its lid, a false door, a lintel, two door jambs and a libation table.*[146]

> *His majesty sent me to Hatnub (Middle Egypt) to bring a great altar of the alabaster of Hatnub. I brought down for him this altar in 17 days, it being quarried in Hatnub. I caused it to travel by ship downstream in this barge. I cut down for it a barge of acacia wood of 60 cubits (30m) in length and 30 cubits (15m) in its width which was assembled in 17 days, in the 3rd month of summer, while there was no water upon the sandbanks.*[147]

Evidence of a mining expedition commanded by Amenemhat during the early Middle Kingdom details the amount of effort required:

> *My majesty sent forth the hereditary prince, governor of the city and vizier, chief of works, favourite of the king, Amenemhet, with a troop of 10,000 men from the southern nomes, Middle Egypt, and the … of the Oxyrrhyncus nome; to bring for me an august block of the pure costly stone which is in this mountain …*

> *Now, his majesty commanded that there go forth to this august highland (the Wadi Hammamat) an army with me of the choicest of the whole land: miners, artificers, quarrymen, artists, draughtsmen, stonecutters, gold workers, treasurers of the king, of every department of the White House, and every office of the king's-house, united behind me. I made the highlands a river, and the upper valleys a water-way. …*

> *Day 28. The lid of this sarcophagus descended, being a block 4 cubits, by 8 cubits, by 2 cubits (about 2m x 4m x 1m), on coming forth from the work. Cattle were slaughtered, goats were slain, incense was put on the fire. Now, an army of 3000 sailors of the nomes of the Northland (Delta) followed it in safety to Egypt.*[148]

Later in the Middle Kingdom, another Amenemhat (known as Ameni), a nomarch who was buried at Beni Hasan, described smaller mining expeditions to extract gold from the Wadi Hammamat mines. By that time the threat from the nomads of the Eastern Desert, or sand dwellers, was almost non-existent. Ameni states:

> *I sailed southward to bring gold ore for the majesty of the King of Upper and Lower Egypt, Kheperkaure (Senusret I), living forever and ever. … I sailed southward, with a number, 400 of all the choicest of my troops, who returned in safety, having suffered no loss. I brought the gold exacted of me, I was praised for it in the palace. … Then I again sailed southward to bring ore, to the city of Coptos, together with the hereditary prince, count, governor of the city vizier, Senusret. I sailed southward with a number, 600 of all the bravest of the Oryx nome. I returned in safety, my soldiers uninjured; having done all that had been told me.*[149]

Numerous mining expeditions of this type occurred throughout the Middle and New Kingdoms, but they may have been much more difficult to conduct during the First or Second Intermediate Periods. Later in this chapter it will become clear that such mining expeditions, although effectively state building constabulary tasks, complemented the foreign maritime expeditions that were also occurring at around the same time. Indeed, it was always necessary to protect such mining expeditions from the nomads living in the Eastern Desert.

As the New Kingdom rulers consolidated their power they were once again able to use their maritime forces for state building tasks. The major temple construction projects of the New Kingdom were supported by numerous mining expeditions and once again without the availability of Egypt's maritime resources, the New Kingdom temples, a number of which may be seen today, could not have been constructed. The massive barges that were constructed to transport Queen Hatshepsut's obelisks down river to the temple at Karnak have already been mentioned. The scene depicts the obelisk's transportation on the barge which is towed by 30 travelling ships and is escorted by three smaller ships.

The monuments of the 19th and 20th Dynasties were often more massive than those of the 18th Dynasty. Records of a number of state building tasks have survived from the reigns of Sety I and Rameses II, including a list of the rations that were supplied for the troops and officers. A mining expedition to Silsileh during the reign of Rameses III lists the men and ships involved:

Year 5, first month of the third season under the majesty of King Rameses III. …	
Men of the army who were under his command	*2000 men*
Quarrymen	*500 men*
Large transports which were under his command	*40*
… Ships	*4*
… …	*500 men*
Total, various persons	*3000 men.*[150]

Diplomatic Tasks

The other major tasks of the Egyptian maritime forces involved trade protection. It can be difficult to categorise as to whether they were diplomatic, constabulary or military in character, as in practice. When maritime trade is effectively protected it is rarely attacked by raiders – whereas unprotected trade becomes a target for potential raiders – then the threat to trade is often enough to prohibit maritime trade. In Egypt, this led to regular maritime trade, during times of strong centralised government or 'order', and the cessation of maritime trade during times of weak centralised government or 'chaos'. In general terms, the major fluctuations in the intra- and inter-regional maritime trade networks within Egypt reflected the amount of 'order' and/or 'chaos' at any specific time in a king's reign. Importantly although the majority of Ancient Egyptian trade was undertaken on behalf of the Egyptian king or a member of the royal family and as money had not yet been invented, all trade was in goods to be used for either consumption or for prestige, if not both.[151] Future studies should be able to determine the influence of Egyptian sea power upon Egypt's trade and should possibly help to resolve some seemingly random distributions of trade goods within, as well as outside Egypt.

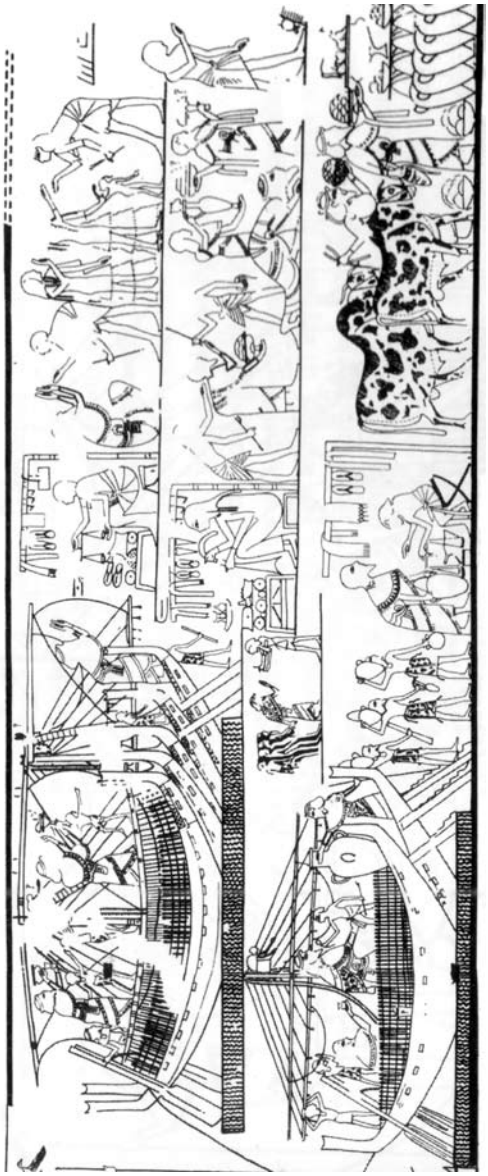
Trade protection in Egypt centred upon the ability of the Egyptian king or his nobles to protect travelling and cargo ships moving up and down the Nile. When potential rivals were strong, such as those in civil war, the ships would have needed larger crews to ward off attackers. During times of relative peace, the threat of retaliation by the king's maritime force was enough to prevent such attacks. Towards the end of the 11th Dynasty, the treasurer Eti of Gebelein was able to boast about his ability to transport grain:

> *I made 30 ships then 30 other ships, and I brought grain for Eni (Esna) and Hefat (Mo'alla), after Gebelein was sustained. The nome of Thebes went up-stream (for supplies). Never did one below or above Gebelein bring to another district. … The people said: 'He is innocent of violence to another'.*[152]

It was the maritime power of King Mentuhotep IV that allowed the lesser nobles like Eti to transport and redistribute supplies in times of peace. In the Middle Kingdom foreign trading missions were able to visit Egyptian cities. Foreigners visiting Egypt were given royal permission to proceed through the frontier posts and travel along the Nile to their destination. The tomb of Khnumhotep II at Beni Hasan shows one of these visits by a group of 37 Asiatics (Syrians) during the reign of Senusret II. A later scene from the New Kingdom tomb of Kenamun at Thebes, shows a number of Syrian ships in port exchanging goods.[153] Most of the crew and the ships' captains were Syrians, although there were also a number of Egyptians onboard. The scene represents an ambassadorial

visit from Syria, bringing gifts and tribute for the Egyptian king.

There are many references to foreign tribute arriving in Egypt, most of which travelled into and through Egypt by ship. Seagoing ships typically unloaded at one of Egypt's harbours and the cargo transferred to smaller river craft for transportation within Egypt itself. The subject of foreign trade will be considered in the subsequent sections where the Egyptian maritime operations in the regions neighbouring Egypt are examined.



Syrian ships in port from the tomb of Kenamun at Thebes

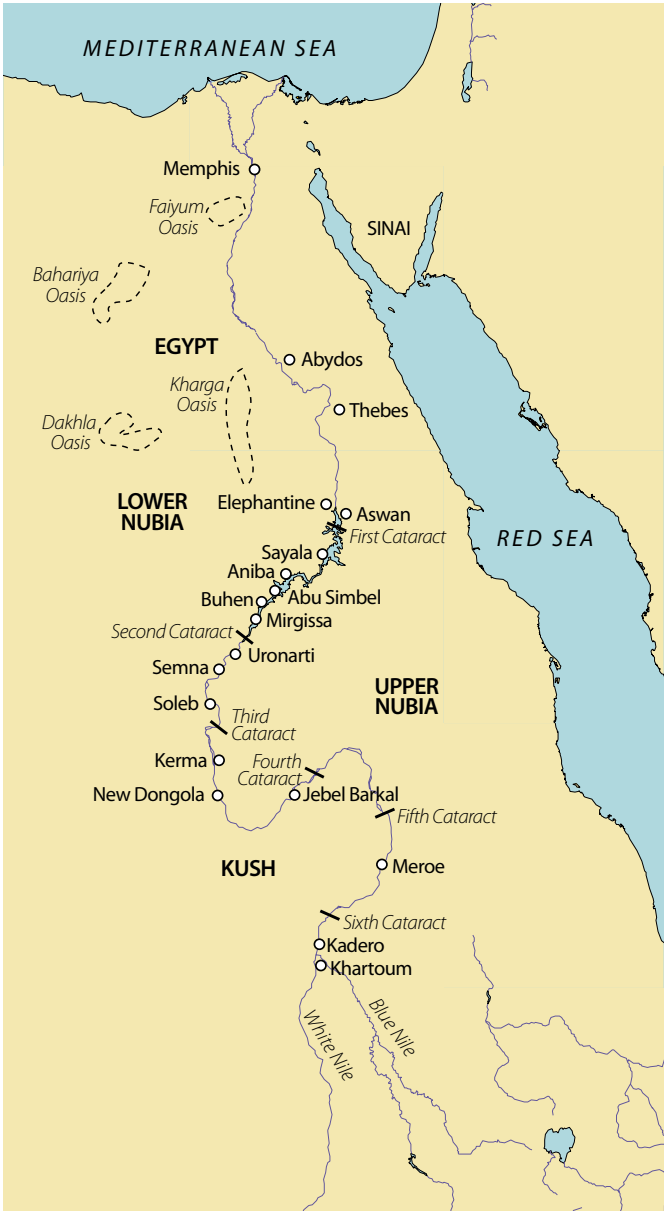
CHAPTER 7 — OPERATIONS IN THE SOUTH — THE NUBIAN NILE

The Nubian Nile, south of the First Cataract and the Egyptian border town of Elephantine, was an effective maritime corridor for trade between Egypt and the rest of Africa. Copper, gold, ebony, ivory and exotic animals entered Egypt from the south, through the hands of Nubian intermediaries or Egyptians who were positioned to usurp the Nubian trade. During the Old Kingdom, Egyptian expeditions into Nubia took what they wanted by force. During the Middle and New Kingdoms, the Egyptians conquered parts of Nubia, which they controlled with a large bureaucracy and military power in order to control trade, obtain taxes and conscript labour. The Egyptians maintained frontier posts in a series of forts strategically placed in the vicinity of the cataracts along the Nubian Nile. At the height of Egyptian power in Nubia during the middle New Kingdom, they controlled the Nile and desert caravan routes through Nubia and much of northern Sudan, as far south as Jebel Barkal and the Fourth Cataract in the vicinity of modern Karima. As Egyptian administrative control moved south and Nubia was absorbed into the Egyptian Empire,[154] southern frontier posts were also maintained in the Nubian Nile and Egyptian maritime forces also conducted constabulary border protection tasks. The border protection activities at Semna have been discussed previously, but by necessity similar border protection tasks would have been performed at other frontier posts depending upon the actual extent of Egyptian power.[155]

Egyptian maritime operations along the Nubian Nile were either military expeditions, constabulary state building or diplomatic trade protection tasks, depending upon the extent of Nubian opposition at the time.

A number of Egypt's early rulers raided Nubia but the rise of the Egyptian state had effectively contributed to the demise of the chiefdoms of Nubia, called the Nubian A-Group by archaeologists.[156] All Nubian resistance was crushed and many of the people killed or captured. The Nubian expedition of the 4th Dynasty King Sneferu may help to explain why:

> *Building of 100 cubit (about 50m)* Dw'-t'wy *ships of mr wood, and of 60 sixteen-barges of the king. Hacking-up the land of the Nubians. Bringing of 7000 living captives, and 200,000 large and small cattle.*[157]



North-east Africa showing Nubian sites and possible location of Punt

During the 6th Dynasty, the vizier Weni records a number of constabulary state building activities, where Nubian resistance was not anticipated. Weni states:

> *His majesty sent me to Ibhat (in Nubia) to bring the sarcophagus named 'chest of the living' with its lid, together with the precious and noble pyramidion for the pyramid 'Merenra appears and is beautiful', my mistress. His majesty sent me to Elephantine to bring a granite false door with its libation table, granite lids, and lintels, and to bring granite gates, libation stones for the upper chamber of the pyramid 'Merenra appears and is beautiful'. I sailed north in my charge to the pyramid 'Merenra appears and is beautiful' in six barges, three* s3t *ships, three 'eight-rib' ships in one expedition.*[158]

> *His majesty sent me to dig out five channels in Upper Egypt, and to make three barges and four* s3t *ships in acacia wood of Wawat (Lower Nubia). Then the rulers of foreign lands of Iretjet, Wawat, Yam and Medjay were dragging wood for it. I did this entirely in one year.*[159]

Unfortunately for the Egyptians, a new population of Nubians, the Nubian C-Group,[160] were now resettling the abandoned lands along the Upper Nubian Nile. The tomb of Harkhuf at Aswan describes at least four expeditions into Nubia, which seem to have been overland. Apparently Egyptian maritime forces were not available to transport and supply Harkhuf's expeditions. It would appear that shortly after Weni's visits during the reign of King Merenra, the Egyptians had lost control of the Nubian Nile, with the C-Group and the rulers of Kush using the absence of Egyptian sea power to their advantage.[161] A series of Nubian expeditions were undertaken by the Egyptians from Egypt's southern frontier at Elephantine; some of which did use Egyptian maritime forces; however, none were successful in the long term. The tomb of Sabny, son of the ship captain Mekhew, at Aswan tells of how his father died in Nubia and how Sabny then recovered his father's body by an expedition overland. The Nubian Nile was clearly a dangerous waterway for the Egyptians. However, it was possible for the Egyptians to use parts of the Nubian Nile providing they could obtain the support from the local Nubian chiefdoms. Another Sabny from Aswan, son of Pepynakht describes how he was able to bring back two obelisks from Nubia:

> *The majesty my lord sent me to make two great barges in Wawat in order to transport two great obelisks to Heliopolis. I went to Wawat with five troops of soldiers. The Nubian mercenaries, whom I pacified (bribed?), were upon*

> *the west and east of Wawat to bring back the troops of soldiers in peace. Never did I allow one to seize a sandal of a man under me. I made these barges so that the majesty of my lord praised me on account of it.*[162]

The First Intermediate Period saw the collapse of Egyptian power and as a consequence the Nubian Nile was left in the hands of the Nubian chiefdoms. Egypt's southern frontier was then protected by the warlords who controlled the frontier city of Elephantine and the southern-most nomes of Upper Egypt. In an effort to prevent Nubians and Medjay (Eastern Desert nomads) from raiding their territories, these warlords in turn were happy to hire Nubians and Medjay as mercenary troops to fight in Egypt itself.

The Egyptian reconquest of Nubia followed the return to power of a centralised Egyptian state, in the form of the Middle Kingdom. Having won their civil war, the Kings of the 12th Dynasty reallocated their maritime forces to conduct a series of expeditions in Nubia. Several sources describe King Amenemhat I's Nubian expeditions. An inscription from Korusko states that Amenemhat I overthrew Wawat, while 'The Teaching of Amenemhat' also states he seized the people of Wawat. The earliest complete description of a Nubian expedition is from the reign of King Senusret I, when Amenemhat informs us:

> *I followed my lord when he sailed southward to overthrow his enemies among the four barbarians. I sailed southward, as the son of a count, wearer of the royal seal, and commander in chief of the troops of the Oryx nome, as a man represents his old father, according to his favour in the palace and his love in the court. I passed Kush, sailing southward, I advanced the boundary of the land, I brought all gifts; my praise, it reached heaven. Then his majesty returned in safety, having overthrown his enemies in Kush the vile. I returned, following him, with ready face. There was no loss among my soldiers.*[163]

Amenemhat I and Senusret I's Nubian expeditions are confirmed by graffiti left by the participants at Gebel el Girgawi, about 180km south of Elephantine.[164] Further expeditions occurred under Amenemhat II, but it was during the reign of Senusret III that canals through the First Cataract were constructed and the southern frontier was pushed to the Third Cataract and the forts of Semna and Uronarti were built.

> *Year 8 under the majesty of the King of Upper and Lower Egypt: Khakaura (Senusret III), living forever. His majesty commanded to make the canal anew, the name of this canal being: 'Beautiful are the Ways of Khakaura*

> *living forever', when his majesty proceeded up-river to overthrow Kush, the wretched. Length of this canal 150 cubits (75m); width 20 (10m); depth 15 (7.5m).*
>
> *Year 16, third month of the second season, occurred his majesty's making the southern boundary as far as Heh (Semna). I have made my boundary beyond that of my fathers. … I captured their women, I carried off their subjects, went forth to their wells, smote their bulls; I reaped their grain and set fire thereto.*[165]

The conquest of Nubia involved at least eight annual expeditions under Senusret III. The biography of Sobek-khu from Abydos describes how he commanded 60 men of the king's own troops during these expeditions.

> *Then I made ready at his side, and his majesty caused that I be appointed to be an 'attendant of the ruler'. I furnished sixty men when his majesty proceeded southward to overthrow the people of Nubia. Then I captured a Nubian in … alongside my city. Then I proceeded northward, following with six of the court; then he appointed me 'commander of the attendants' and gave to me 100 men as a reward.*[166]

A series of dispatches from the frontier post at Semna, dating to the reign of Amenemhat III, suggest that after the destructive campaigns of Senusret III the forces on the southern frontier performed constabulary border protection duties more than military defence of Egypt's empire in Nubia. The Nubians were subjugated by relatively small Egyptian forces manoeuvring along both the Nubian Nile and the desert trails. The weakening of the central power in Egypt during the 13th Dynasty coincided with a resurgence of their enemy's power in Nubia. Although our written sources from such chaotic times are rare, an example of a Nubian expedition to suppress rebellious Medjay in Lower Nubia, dated to the later part of the 13th Dynasty during the reign of King Sobekhotep IV, has fortunately survived.[167] During the Second Intermediate Period, the power vacuum left in Nubia by the Egyptians was filled by the rising power of Kush. The king of Kush dominated Nubia and attacked parts of southern Egypt. He also became an ally of the Hyksos kings – communications between them went overland along the caravan routes west of the Nile. The Theban, King Kamose describes how he was isolated between the king of Kush in the south and the Hyksos king in the north.[168] But as King Ahmose expelled the Hyksos from Avaris and reunified the Egyptian state, he did not

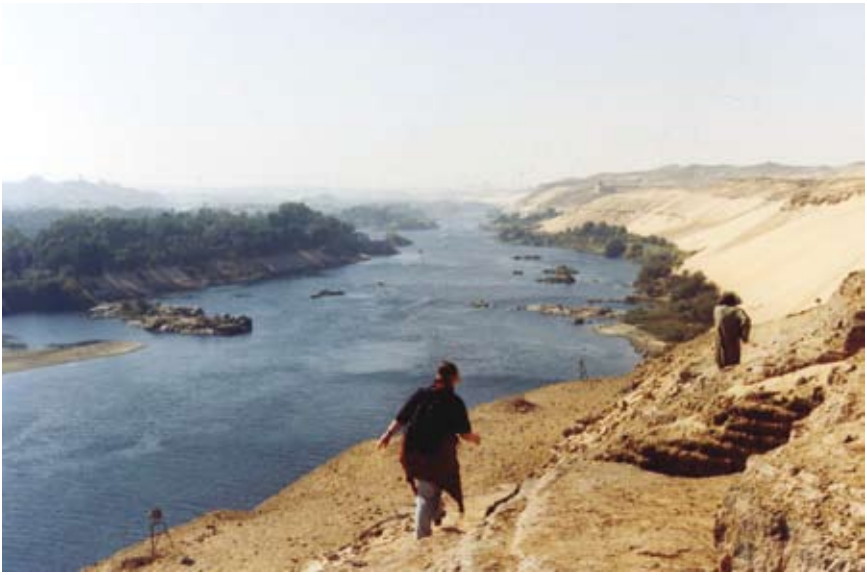
forget Nubia and Kush to his south. The noble Ahmose (son of Ebana) describes his first Nubian expedition under the king after whom he was named, King Ahmose:

> *Now after his majesty had slain the Mentyu of Asia, he sailed south to Khent hen nefer, to destroy the bowmen of Nubia. Then his majesty made a great slaughter of them. Then I brought plunder therefrom, two living men and three hands. Then I was rewarded with gold another time and behold two female slaves were given to me.*[169]

His service was not yet over, for Ahmose (son of Ebana) also served during both King Amenhotep I's and King Thutmose I's Nubian expedition.

> *Then I conveyed by ship the King of Upper and Lower Egypt, Djeserkara (Amenhotep I), true of voice, when he was sailing south to Kush to extend the boundaries of Egypt. Then his majesty slew that Nubian bowman in the middle of his army, they being fetched tied together without loosing them. The fleeing were destroyed like those who did not exist. Lo, I was at the front of our army. I fought very well and his majesty saw my valour.*[170]

> *Then I rowed the King of Upper and Lower Egypt, Aakheperkaura (Thutmose I), true of voice, when he was sailing south to Khent hen nefer, in order to put down the strife throughout the foreign lands, and to expel the intruders from the desert region. Then I was valiant in front of him in the bad water in the hauling of the ships over the cataract. Then one appointed me to be 'Captain of Sailors'. … Then his majesty was in a rage, indeed like a panther. His majesty shot his first arrow, it being firm in the breast of that enemy. Then those … they having fainted before his uraeus. There was done a time of slaughter, and their dependants were brought away as living captives. Then his majesty sailed south by boat, foreign lands were in his grasp. That vile Nubian bowman was as one hanging upside down in the front of the Falcon ship of his majesty. This ship landed at the temple of Karnak.*[171]



The First Cataract of the Nile, looking south past Elephantine Island

An inscription on the island of Sehel near Elephantine, describes how Thutmose I had to clear the canal built at the First Cataract during the Middle Kingdom before he would be able to attack Kush.

> *His majesty commanded to dig this canal, after he found it stopped up with stones, so that no ship sailed upon it. He sailed downstream upon it, his heart glad having slain his enemies.*[172]

The clearing of a canal would normally be considered a constabulary state building task, but such a task was also undertaken as part of a military operation. In this instance:

> *His majesty sailed this canal in victory and power, at his return from overthrowing the wretched Kush.*[173]

The Nubians rebelled during the following reign of Thutmose II and he was forced to send an expedition into Nubia to put down the rebellion:

> *One came to inform his majesty as follows: 'The wretched Kush has begun to rebel, those who were under the dominion of the lord of the two lands plan hostility, beginning to smite him. … Then his majesty despatched a numerous army into Nubia on his first occasion of a campaign, in order to overthrow those who were rebellious against his majesty or hostile to the lord of the two lands. Then this army of his majesty arrived at wretched Kush … This army of his majesty overthrew those barbarians; they did not let anyone among their males, according to all the command of his majesty, except one of those children of the chief of the wretched Kush, who was taken away alive as a living prisoner with their people to his majesty.*[174]

Nubian expeditions continued to take place during the New Kingdom and even though Thutmose III extended the southern frontier to the Fourth Cataract and the frontier post of Jebel Barkal, it is most likely that the Kushite king no longer had influence in Nubia and that the Nubians who had survived the reconquest no longer remained a threat to Egyptian power along the Nubian Nile. The region was never really pacified; wherever the Egyptian presence was felt, the Nubians either became allies or retreated, but whenever the Egyptian presence was not visible some groups of Nubians may have considered rebellion.

King Thutmose IV was confronted by one such Nubian rebellion:

> *After these things his majesty proceeded to overthrow the people in Nubia; mighty in his barge of … like Ra when he shows himself in the celestial barque … His army of his victories was with him on both banks, while the recruits were upon its shore, and the ship was equipped with attendants, as the king proceeded upstream like Orion. He illuminated the South with his beauty; men shouted because of his kindness, women danced at the message. … His army came to him, numerous with his mighty sword. … He found all his foes scattered in inaccessible valleys. …*[175]

It can be questioned whether such Nubian expeditions were military operations at all. They appear to have more to do with exhibiting the power of the king and his fleet to the Egyptian people, than to suppress a determined and rebellious Nubian enemy. At times, expeditions to Nubian may have been nothing more than royal propaganda, with little risk. Amenhotep III's Nubian expedition is much like that of his father. An

inscription from Semna lists a total of 1052 men, women and children killed or captured during one of Amenhotep's Nubian expeditions.[176]

With the Egyptians controlling maritime trade, tribute from the south flowed into Egypt in large quantities, especially of gold, ivory and ebony. A scene from the tomb of Huy at Thebes, who lived during the reign of Tutankhamun, has the tribute from Kush arriving in six decorated boats.

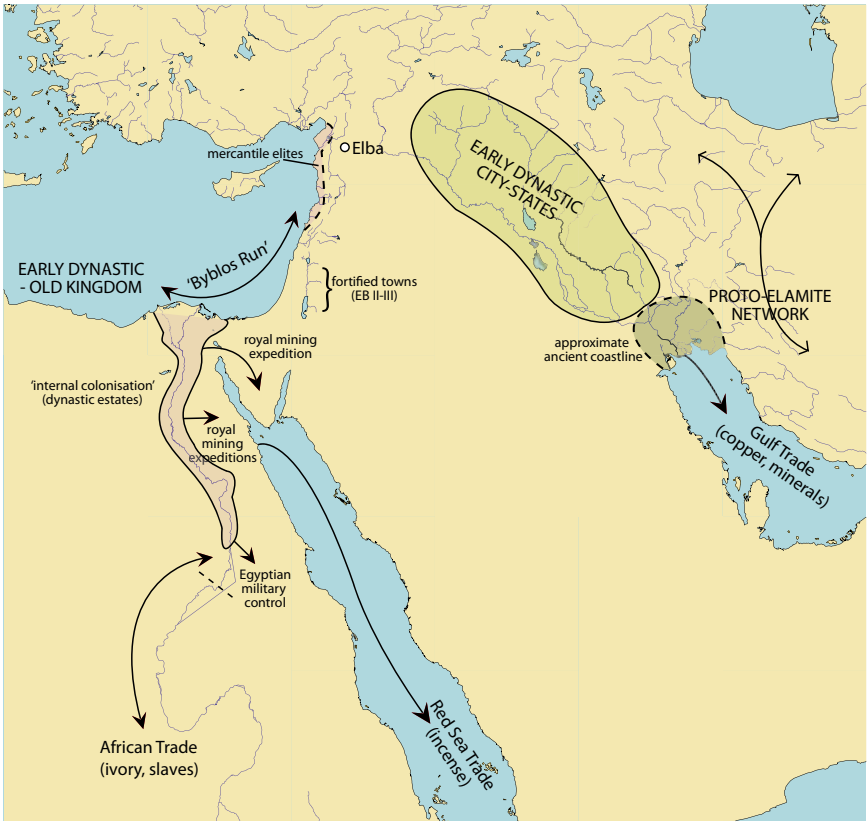
> *Arrival from Kush bearing this good tribute of all the choicest of the best of the south countries. Landing at the city of the South (Thebes) by the king's son of Kush, Huy.*[177]

The monumental scenes of Nubian victories dating to the reigns of Horemheb, Sety I and Rameses II may be largely propaganda exercises, but they most likely did occur and the very presence of maritime forces demonstrated the ability of the Egyptians to project power into Nubia. The number and size of Rameses II's monuments in Nubia, including the remarkable temple at Abu Simbel, are full with propaganda imagery that emphasise Egyptian military power and to ward off any Nubian rebellion. Either, Ramese II was an egomaniac who constructed these edifices of Egyptian power for no reason other than self aggrandisement, or perhaps these structures were built to frighten the Nubian people. Declining Egyptian power and a corresponding rise in political organisation amongst the Kushite and Nubian peoples of the south would have led to an increased threat to Nubia.

The Nubian expedition of Rameses III, as depicted upon the walls of the temple at Medinet Habu, are perhaps the height of the series of Egyptian propaganda scenes. Many of the scenes are repetitions of those of earlier kings and it is possible that Rameses III did not conduct an expedition into Nubia himself. It is possible that, as with his recent predecessors, the conflicts in Nubia during the later New Kingdom were mostly constabulary, suppressing minor insurrections or minor encounters on the extremes of the southern frontier.

The Egyptian presence in Nubia remained strong throughout the New Kingdom period. Towards the end of the 20th Dynasty, there is an example where the Viceroy of Kush, Payneshsi, is commanded to construct a portable shrine for a goddess and transport it by ship to Tanis in the north of Egypt.[178] The Egyptian Empire in Nubia appears to have continued to some extent, even during the Third Intermediate Period when the centralised Egyptian state had collapsed, but these outposts of empire could not have lasted long without support from the southern part of Egypt, which was under the rule of the Priests at Thebes.[179]

Egyptian maritime forces were frequently employed in support of mining expeditions along the Egyptian Nile and considering the geological diversity of the Nubian deserts it was a logical decision to organise similar mining expeditions along the Nubian Nile. In Nubia, however, expeditions had to overcome the potential threat of attack or resistance by elements of the Nubian population. Even though there is no direct evidence of attacks on mining expeditions in Nubia, military forces were necessary to provide security. Few records detailing mining expeditions in Nubia have survived, but archaeological evidence has confirmed the Egyptian mining and quarrying operations in the area.[180] Evidence of expeditions into Nubia to extract gold have been found from the Old, Middle and New Kingdoms.[181] It appears that such constabulary state building operations were important demonstrations of the power and prestige of each Egyptian king.



Major trade routes during the Early Dynastic and Old Kingdom periods

CHAPTER 8 – OPERATIONS IN THE SOUTH – THE RED SEA

Perhaps the most enlightening series of mining expeditions involving maritime forces were those that the Egyptians took across the northern part of the Red Sea to South Sinai. In the Early Dynastic Period, the Egyptians sent mining expeditions to Wadi Maghara and Wadi Kharig in the South Sinai hills. These sites were major sources of copper and turquoise. Numerous inscriptions carved upon the rocks at Wadi Maghara show that the area was mined by many kings of the Old Kingdom, including Djoser, Sekhemkhet, Sneferu, Khufu, Sahura, Nyuserra, Menkauhor, Djedkara-Isesi and Pepy I. Throughout the Old Kingdom the nomadic peoples of the Sinai were a significant threat to the Egyptian mining activities in the area.

The autobiography of the vizier Weni describes a series of punitive expeditions, under King Pepy I, against the 'Asiatic sand dwellers' who opposed the Egyptian influence in South Sinai:

> *When his majesty opposed the affairs of the Asiatic sand dwellers, his majesty raised an army of many tens of thousands: from Upper Egypt in its entirety, southward from Elephantine northward to Medenyt; from Lower Egypt from both sides, in their entirety; from Sedjer, from Khensedjeru, from the Iretjet nubians, the Medjay nubians, the Yam nubians, from Wawat nubians, from Kaa nubians, and from the land of the Tjemeh (Libyan nomads). His majesty sent me in command of this army: the local princes, the seal-bearers of the King of Lower Egypt, the sole companions of the palace, the overlords, the governors of domains of Upper and Lower Egypt, and the overseers of the administrative districts, each in front of a troop of Upper and Lower Egypt from the domains and cities which they governed. As well as nubians of those foreign lands. It was I who made the plan for them, while my office was overseer of the bodyguard of the palace, because of the reliability of my nature. So that no-one fights his companion. So that no-one there seizes a loaf or sandals from one upon the road. So that no-one there seizes a loincloth from any city. So that no-one seizes any goat from any person. I led them from the Northern Island and the gate of Iyhotep, in the district of Horus, lord of truth, while I was*

in this office … everything. I revealed the number of these troops, never had they been revealed by any servant.

This army returned in peace, it destroyed the land of the sand dwellers.
This army returned in peace, it flattened the land of the sand dwellers.
This army returned in peace, it sacked its strongholds.
This army returned in peace, it cut down its figs and its vines.
This army returned in peace, it set fire in the house of each chief.
This army returned in peace, it slew the troops among it in many thousands.
This army returned in peace, it removed its troops among it in great multitudes as living captives.
His majesty praised me because of it more than anything. His majesty sent me to lead this army five times to subdue the land of the sand dwellers, every time they rebelled, with these troops. I acted so that his majesty would praise me over it. It was said that strong rebels were among these foreigners at the place called 'the Nose of the Gazelle's head'. I crossed in nmiw *ships with these troops. I made a landing at the rear heights of the mountain range upon the north of the land of the sand dwellers, while an entire half of this army was upon the road. I returned when I destroyed them in their entirety and when I slew every rebel among them.*[182]

Weni's story suggests that by mounting a series of maritime expeditions, he used hit and run tactics to overcome Egypt's enemies in the South Sinai. Recent archaeological evidence from el Markha, in the South Sinai, supports the maritime nature of the South Sinai expeditions. El Markha is a fortified harbour on the Red Sea coast of South Sinai, which is opposite the Egyptian coast and is the one direct route to the Wadi Maghara mining area.[183] A mining expedition under Pepy II, recorded on the rocks at Wadi Maghara, confirm the main opposition in the South Sinai was defeated, although the possibility of minor raiding by Sinai nomads always remained.[184] Subsequently, during the First Intermediate Period, the Egyptians were too involved in internal conflicts to send expeditions across the northern Red Sea into South Sinai.

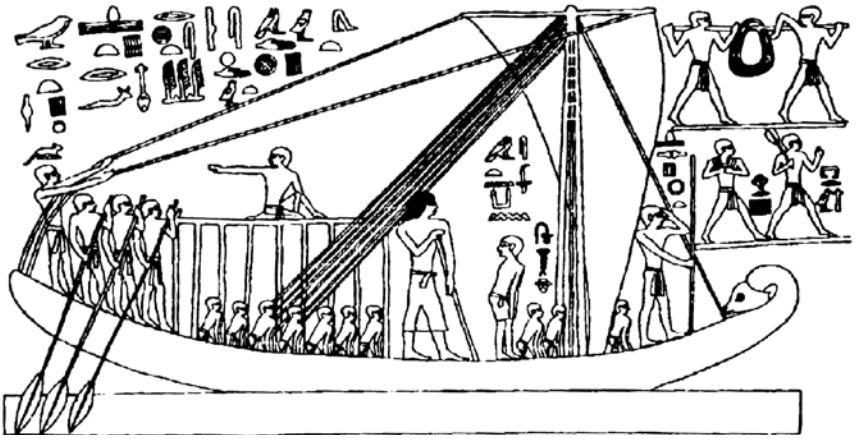
In the Middle Kingdom and most of the New Kingdom, Egypt expanded its mining operations in the South Sinai to include Wadi Nasb and Serabit el Khadim, while Reqeita and Timna (Negev) were also exploited by Ramessid kings from Sety I to Rameses V. The archaeological evidence suggests that Egyptian expeditions to South Sinai faced

intense hostilities throughout the Old Kingdom, but it seems that the Sinai nomads became less of a threat in subsequent periods. A Middle Kingdom stele for a nobleman, Nessumontu, records his expedition against the Asiatic peoples and sand dwellers, although his biography may be a proud version of a relatively minor action:

> *Respecting every word of this tablet, it is truth, which happened by my arm, it is that which I did in reality. There is no deceit, and there is no lie therein. I defeated the Asiatic peoples, the sand dwellers. I overthrew the strongholds of the nomads, as if they had never been. I coursed through the field, I went forth before those who were behind their defences, without my equal therein, by command of Montu, to him who followed the plan of . . . .*[185]

Another Middle Kingdom stele, for a noble named Sihathor, records an expedition to the mine-land Sinai, and bringing turquoise from the area. It is during the reign of Amenemhat III that has some of the clearest evidence for constabulary operations in support of mining in the South Sinai. An inscription in Wadi Maghara states:

> *Khentkhetihotep-Khenemsu was dispatched, in order to bring malachite and copper. List of his soldiers: 734.*[186]



Old Kingdom travelling ship from the tomb of Nikanesut

The following inscription by Harnakht confirms that the expedition was by ship.

> *I crossed over the sea, bearing luxuries by commission of Horus, lord of the palace (Pharaoh).*[187]

> *The inscriptions at Wadi Maghara and Serbit el Khadim suggest that many more mining expeditions to the South Sinai were completed during Amenemhat III's reign and that these expeditions were mostly if not all maritime.*[188]

The Hyksos rulers of the Second Intermediate Period may have exploited the South Sinai; however, a number of surviving Proto-Sinaitic inscriptions suggest the region may have been left to a new hybrid Egyptian and Syro-Palestinian population. The lack of Egyptian inscriptions dating to the Second Intermediate Period in South Sinai suggests that the Egyptians were too preoccupied with internal troubles at this time to spare the maritime forces required to support further mining expeditions. The evidence for renewed interest in the Sinai came with the increasing power of the Egyptian New Kingdom rulers. However, by this time the expeditions to the Sinai no longer warranted detailed inscriptions. The expeditions had become routine and must have encountered little if any resistance. A fragmentary inscription from Serabit el Khadim, mostly unreadable, dating to the reign of Amenhotep III mentions the 'Great Green', which is the Ancient Egyptian phrase for the 'sea' and hence suggests the continued use of the Red Sea route to the South Sinai.[189]

The Papyrus Harris, from the reign of Rameses III, describes another mining expedition to the Sinai in a much more constabulary state building task than a military expedition.

> *I sent forth my messengers to the country of the Atika (a part of the Sinai?), to the great copper mines which are in this place. Their ships carried them; others on the land journey were upon their asses. It has not been heard before, since the time before the kings. Their mines were found abounding with copper; it was loaded by ten-thousands into their ships. They were sent forward to Egypt, and arrived safely. It was carried and made into a heap under the balcony, in many bars of copper, like hundred-thousands, being the colour of gold of three times. I allowed the people to see them like wonders. Then I sent forth butlers and officials to the turquoise-country, to my mother, Hathor, mistress of the turquoise. There were brought for her silver, gold, royal linen,* mek *linen, and many things into her presence like*

> *the sand. There were brought for me wonders of real turquoise in numerous sacks, brought forward into my presence. They had not been seen before, since the time before the kings.*[190]

The northern part of the Red Sea was not the only part of this major waterway to be used by the Ancient Egyptians. Despite some difficulties with navigation and the need to use ships strong enough to survive seas that were much rougher than the Nile, the Egyptians were the first to open communication with those who lived in the southern part of the Red Sea.

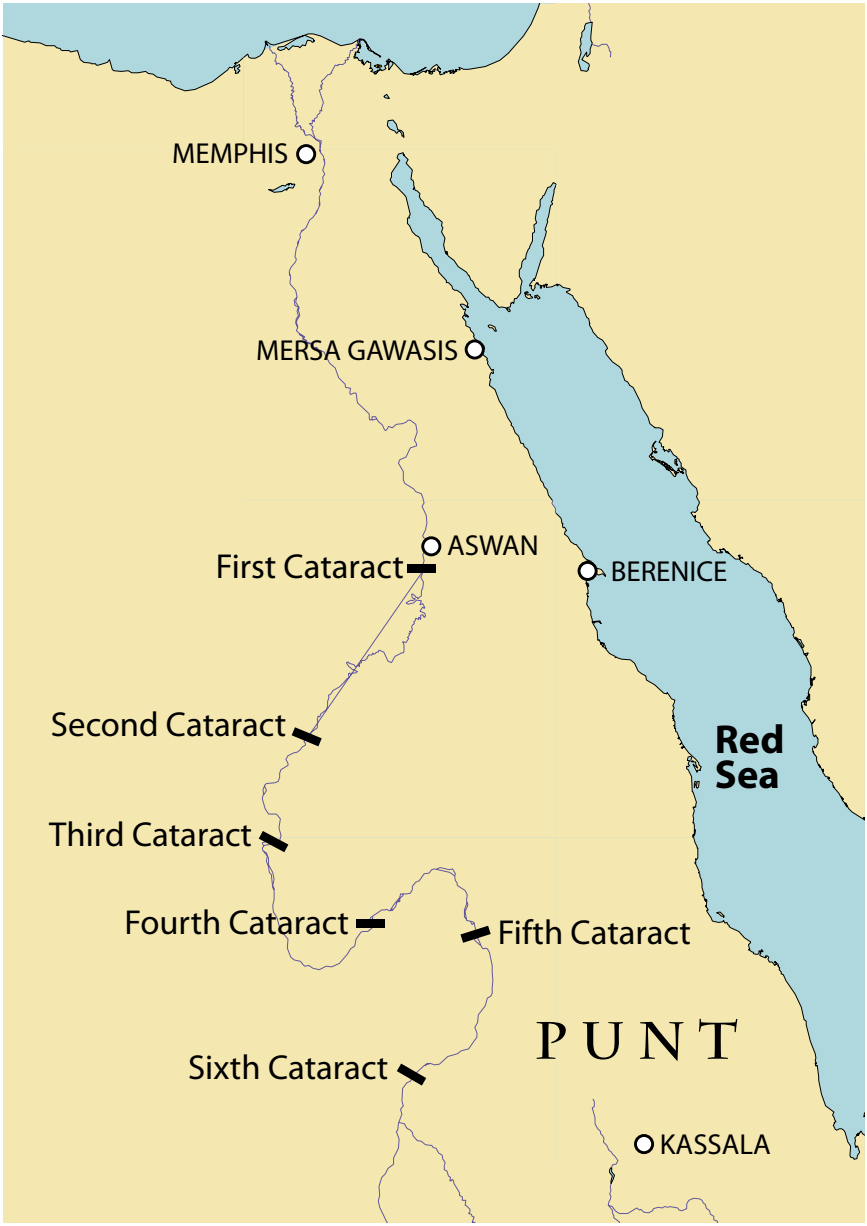
The Red Sea was and still is, a major communications link, extending for over 2000km, from the Mediterranean Sea to the Arabian Sea. Today, with the Suez Canal, the Red Sea provides a direct route between Europe and the rest of the world, but such globalised trade systems did not exist in the ancient world.[191] It is likely that Egyptian seafarers – raider/traders – travelled along the shores of the Red Sea in the Predynastic period and were probably the first to contact the peoples living along the Sudanese coast and the modern coast around the horn of Africa; the region called Punt by the Ancient Egyptians.[192] Such early journeys were the forerunners for the later royal expeditions to Punt, where small fleets of seagoing ships were fitted-out for the relatively long journey along the Red Sea to Punt and back.

The earliest recorded expedition to Punt, dating to the reign of King Sahura in the 5th Dynasty, is found on the Palermo Stone. A biography refers to a pygmy from Punt arriving at the court of the 5th Dynasty King Djedkara-Isesi. During the 6th Dynasty, records from tombs at Aswan also mention expeditions to Punt. One of the Aswan nobles, Khnumhotep, boasts about his trading mission to Punt:

> *I went forth with the lord, count, seal-bearer of the god, Khewy to Punt.*[193]

While another noble called Pepynakht explaines the dangers of the route to Punt.

> *Now, the majesty of my lord sent me to the land of the Asiatics (Eastern Desert nomads?), to bring for him; the sole companion, captain of sailors, overseer of the mercenaries, Anankht, who was equipping a 'Byblos' ship there for Punt. Lo, Asiatics of the sand dweller's land slew him with the company of soldiers who were with him. … those Asiatics. … causing to flee and slaying them there, with the company of soldiers who were with me.*[194]



North-east Africa with possible location of Punt

In Pharaonic times, all trade had to cross a land bridge between the Nile and the Red Sea. The shortest and most direct route was from the Nile through the Wadi Hammamat or Wadi Qena to the Red Sea coast. Ships were disassembled on the banks of the Nile, and the ships and trade goods were then transported by mule across the Eastern Desert before they were reassembled at a location on the Red Sea coast near Quseir. Pepynakht's biography confirms that even before an expedition could reach the Red Sea they could anticipate being attacked by nomads of the Eastern Desert. Alternative routes headed for the northern Sinai, either by leaving Memphis travelling north-east along the Nile and then overland through the desert in the vicinity of modern Port Suez, or heading east of Memphis through Wadi Digla to the Red Sea coast. From the northern Red Sea, sailing ships used the prevailing winds that favoured travel south along the Red Sea coast. The return voyage was more difficult, although during winter the currents and winds in the southern Red Sea assisted ships travelling north to the area around Quseir.[195]

A noble called Henu describes an expedition to Punt under King Mentuhotep III of the 11th Dynasty.

> *My lord, life, prosperity and health, sent me to dispatch a ship to Punt to bring for him fresh myrrh from the sheiks over the Red Land, by reason for him in the highlands. Then I went forth from Koptos upon the road, which his majesty commanded me. There was with me an army … I went forth with an army of 3000 men. I made the road a river, and the Red Land a stretch of field, for I gave a leathern bottle, a carrying pole, 2 jars of water, and 20 loaves to each one among them every day. …*
>
> *Then I reached the Red Sea; then I made this ship, and I dispatched it with everything, when I had made for it a great oblation of cattle, bulls and ibexes. Now, after my return from the Red Sea, I executed the command of my majesty, and I brought for him all the gifts, which I had found in the regions of God's Land (Punt). I returned through the valley of Hammamat.*[196]

Recent excavations at Wadi Gawasis on the Red Sea coast have confirmed another trade route to Punt during the Middle Kingdom, going from the Nile through the Eastern Desert, in this case through the Wadi Qena, to the Red Sea coast.[197] Surviving records from the reigns of Senusret I and Amenemhat II confirm the use of this route for expeditions to Punt during the Middle Kingdom.

> *Giving divine praise and laudation to Horus … , to Min of Koptos, by the hereditary prince, count, wearer of the royal seal, the master of the judgment-hall, Khentkhetwer, after his arrival in safety from Punt; his army being with him, prosperous and healthy; and his ships having landed at Sewew (Wadi Gawasis). Year 28 (Amenemhat II).*[198]

These Red Sea journeys were probably the original inspiration for the Middle Kingdom mythological 'Tale of the Shipwrecked Sailor'.

> *But I shall tell you something like it that happened to me. I had set out to the king's mines, and had gone to sea in a ship of a hundred and twenty cubits (60m) in length and forty cubits (20m) in width. One hundred and twenty sailors were in it of the pick of Egypt. Looked they at sky, looked they at land, their hearts were stouter than lions. They could foretell a storm before it came, a tempest before it broke. A storm came up while we were at sea, before we could reach land. As we sailed it made a swell and in it a wave eight cubits (4m) tall. The mast was struck by a wave. Then the ship died. Of those in it not one remained. I was cast on an island by a wave of the sea. I spent three days alone, with my heart as companion. Lying in the shelter of trees I hugged the shade.*[199]

After encountering a mystical giant snake, lord of Punt and ruler of the phantom island, the shipwrecked sailor attempts to gain the giant snake's favour.

> *I shall send you ships loaded with all the treasures of Egypt, as is done for a god who befriends people in a distant land not known to people.*[200]

The sailor is then rescued by another Egyptian ship and loads the ship with the rich products of the lord of Punt.

> *Then he gave me a load of myrrh, oil, laudanum, spice, perfume, eyepaint, giraffe's tails, great lumps of incense, elephant's tusks, greyhounds, long-tailed monkeys, baboons, and all kinds of precious things. I loaded them on the ship. …*
>
> *I went down to the shore near the ship; I hailed the crew which was in the ship. I gave praise on the shore to the lord of the island, those in the ship did*

> *the same. We sailed north to the king's residence. We reached the residence in two months, all as he (the giant snake) had said. I went to the king; I presented to him the gifts I had brought from the island. He praised god for me in the presence of the councillors of the whole land.*[201]

Although this mythological story has many allegorical references to this world and the afterlife, the 'Tale of the Shipwrecked Sailor' appears to be loosely based on facts about the Red Sea expeditions known by the Middle Kingdom Egyptian audiences.

There is little evidence of further expeditions to Punt, until the New Kingdom and the reign of Queen Hatshepsut. Hatshepsut's Punt expedition was mentioned in an earlier chapter describing Ancient Egyptian seagoing ship technologies. Many details of the Punt expedition are provided by the accompanying representations in the queen's mortuary temple at Deir el Bahri. The departing fleet shows three ships underway with a pilot ordering them to 'steer to port'. Two other ships are moored nearby, while the water below can be identified by the fish types as the Red Sea. The accompanying inscriptions states:

> *Sailing in the sea, beginning the goodly way toward God's land, journeying in peace to the land of Punt, by the army of the lord of the two lands, according to the command of the lord of the gods, Amun, lord of Thebes, presider over Karnak, in order to bring for him the marvels of every country, because he so much loves the King of Upper and Lower Egypt, Maatkara (Hatshepsut) ….*[202]

Upon arrival in Punt the Egyptians are received in awe. The scene is an African village including myrrh trees, round huts and the people of Punt. The text continues:

> *The arrival of the king's-messenger in God's Land, together with the army which is behind him, before the chiefs of Punt. … The coming of the chiefs of Punt, doing obeisance, with bowed head, to receive this army of the king; they give praise to the lord of gods, Amun-Ra. … (over the people of Punt) They say, as they pray for peace: 'Why have you come hither unto this land, which the people know not? Did ye come down upon the ways of heaven, or did ye sail upon the waters, upon the sea of God's Land? Have ye trodden the way of Ra? Lo, as for the king of Egypt, is there no way to his majesty, that we may live by the breath which he gives?*[203]

Two of the ships are loaded:

> *The loading of the ships very heavily with marvels of the country of Punt; all goodly fragrant woods of God's land, heaps of myrrh-resin, with fresh myrrh trees, with ebony and pure ivory, with green gold of Emu, with cinnamon wood, khesyt wood, with ihmut incense, sonter incense, eye cosmetic, with apes, monkeys, dogs, and with skins of the southern panther, with people of Punt and their children. Never was brought the like of this for any king who has been since the beginning.*[204]

Three ships then arrive in full sail:

> *Sailing, arriving in peace, journeying to Thebes with joy of heart, by the army of the lord of the two lands, with the chiefs of this country behind them. They have brought that, the like of which was not brought before other kings, being marvels of Punt, because of the greatness of the fame of this revered god, Amun-Ra, lord of Thebes.*[205]

Hatshepsut's expedition to Punt, although the most famous, was not the only one recorded for the New Kingdom. The tomb of the vizier Rekhmire includes a scene depicting offering bearers carrying trade goods from Punt, with the fleet-captains exclaiming 'the treasuries are overflowing with the tribute of all countries'. The mortuary temple of Amenhotep III at Kom el Heitan, on the west bank at Thebes, proclaims the abundance of trade from Punt, while the temple of Karnak includes mention of Punt by Horemheb and Sety I. Of course, Rameses II also boasts about his power over the people of Punt in his temple at Abydos. However, by this time it appears that an expedition to Punt where large quantities of valuable products are easily procured has become a recurring element of imperial propaganda, it is possible that expeditions to Punt became less common during the Ramessid period due to the need for Egyptian maritime forces to be used in defence of Egypt in the north. Papyrus Harris does, however, include a further description of another Punt expedition, this time under the reign of Rameses III, so it is possible that Punt expeditions did continue but they may have been used more as a source of propaganda.

> *I hewed great galleys with barges before them, manned with numerous crews, and attendants in great number; their captains of marines were with them, with inspectors and petty officers, to command them. They were laden with the products of Egypt without number, being in every number like*

> *ten-thousands. They were sent forth into the great sea of the inverted water, they arrived at the countries of Punt, no mishap overtook them, safe and bearing terror. The galleys and the barges were laden with the products of God's land, consisting of all the strange marvels of their country: plentiful myrrh of Punt, laden by ten-thousands, without number. Their chief's children of God's land went before their tribute advancing to Egypt. They arrived safely at the highland of Koptos; they landed in safety, bearing the things which they brought. They were loaded, on the land-journey, upon asses and upon men; and loaded into vessels upon the Nile, at the haven of Koptos. They were sent forward down stream and arrived amid festivity, and brought some of the tribute into the royal presence like marvels. Their chief's children were in adoration before me, kissing the earth, prostrate before me. I gave them to all the gods of this land, to satisfy the two serpent goddesses every morning.*[206]

The Ancient Egyptians used the Red Sea for expeditions to the Sinai and to the southern Sudan and the horn of Africa (Punt), to obtain products that were valuable to the Egyptian kings and nobles. The southern trade in the Red Sea was most important whenever the trade through Nubia was under threat or too costly due to interference by the rulers of Kush. It should also be noted that this Red Sea trade was somewhat one-sided, being between the Egyptian state and the local rulers of the chiefdoms of Punt. There was no trade between territorial or city-states. Some scholars have suggested that maritime trade between Egypt and Mesopotamia travelled from Egypt along the Red Sea, the southern coast of Arabia and into the Persian Gulf; however, there is currently no evidence to support such a route. The trade and cultural influences that did reach Egypt from Mesopotamia arrived via the overland trade routes through Syria, then over water in the Mediterranean Sea and into Egypt through the Nile Delta.

Mediterranean trade routes during the Old and Middle Kingdom

CHAPTER 9 — OPERATIONS IN THE NORTH — THE MEDITERRANEAN SEA

The Nile Delta is often seen as a muddy and swampy barrier to shipping, but for those who knew their way through these intricate waterways it was a communications link between the Egyptian Nile and the Mediterranean Sea. The introduction of agriculture into Egypt at the beginning of the Neolithic period originated from northern Syria and the most likely communications route was from the Mediterranean through the Nile Delta.[207] Unfortunately the evidence from these times is very patchy and the processes involved with the Neolithic in Egypt and the rest of the Mediterranean world are just starting to be understood through recent research. However, during the Egyptian Predynastic period, there is much more evidence of sea communications between Egypt and the Syrian coastal cities, especially Byblos.[208] Byblos, positioned on the Lebanese coast, was prized for its high quality cedar, especially suitable for shipbuilding.[209] The evidence suggests that maritime trade links between the cities of Upper Egypt and the cities of the Lebanon were regular activities from the later Predynastic period onwards. The growth of maritime trade is linked with the formation of the early states in Mesopotamia and Egypt. As the influence of the Uruk kingdoms of Mesopotamia expanded northwards along the Tigris and Euphrates valleys, the cities along the northern Syrian seaboard also grew. These Syrian cities then became much more important to the rising Egyptian state as a source for prestige goods, but also for oils, wines and quality cedar wood. Although overland trade across the Sinai also flourished at this time, the maritime trade carried significantly larger quantities of goods over much larger distances. The maritime trade between Egypt and northern Syria was characterised by direct contact between elite groups of each society, who were able to mobilise the local production of commodities by the establishment and control of workshops with specialist craft persons working on a full-time basis.[210]

A number of written sources describe trade and the use of maritime forces during the Old Kingdom. The Palermo Stone records a trading expedition to the Lebanon under King Sneferu: 'Bringing of 40 ships filled with cedar wood.'[211] For the 5th Dynasty, King Sahura's seagoing ships have already been mentioned. They depict an expedition returning to Egypt from Syria.[212]

The Aswan noble Khnumhotep, who boasted about his trading mission to Punt, also boasts about his trading mission to Byblos:

I went forth with the lord, count, seal-bearer of the god, Tjetji to Byblos.[213]

These missions were apparently peaceful and should be considered as diplomatic trade protection operations rather than military expeditions.

The Ancient Egyptian maritime forces were well versed in what would today be labelled as manoeuvre warfare. An expedition against rebels in Southern Palestine is recorded by the vizier Weni during the 6th Dynasty. This was a short amphibious campaign, using a surprise manoeuvre to surround and attack the enemy from behind:

> *It was said that strong rebels were among the foreigners at the 'Nose of the Gazelle's head'. I crossed in* nmiw *ships with these troops. I made a landing at the rear heights of the mountain range upon the north of the land of the sand-dwellers, while an entire half of this army was upon the road. I returned when I destroyed them in their entirety and when I slew every rebel among them.*[214]

There are no records of maritime forces operating in the Mediterranean Sea during the First Intermediate Period and the archaeological record shows that very few items were imported from Syria during that time. It is during the Middle Kingdom that the trade routes through the Mediterranean Sea reopen. The northern Syrian coastal cities maintained strong trade relations with the Egyptians. The Middle Kingdom literary text 'The Story of Sinuhe' describes the typical trading relationship between the elites of Syria and Egypt. Sinuhe flees Egypt and travels overland to Byblos, where he befriends Ammuneshi the ruler of Upper Retjenu (in North Syria). Sinuhe becomes the commander of troops in defence of the Hyksos, a term used later to describe the 15th Dynasty rulers of Egypt and is accepted as 'a hero of Retjenu'. His fame reaches Egypt and the new king Senusret I invites him to 'Come back to Egypt!'

> *Then his majesty sent a trusted overseer of the royal domains with whom were loaded ships, bearing royal gifts for the Asiatics who had come with me to escort me to Horus-ways. I called each one by his name, while every butler was at his task. When I had started and set sail, there was kneading and straining beside me (wind in the sails?), until I reached the city of Itj-tawy (Sile).*[215]

This story confirms the intimate relationship between the Syrians and the Egyptians, although it also supports the independent political nature of the northern Syrian rulers. It is probable that the Egyptian maritime forces conducted regular trading expeditions to Byblos and other Syrian coastal cities throughout much of the Middle Kingdom. The archaeological evidence supports such supposition of a regular flow of trade. For

instance, objects dating to the reign of Amenemhat III have been uncovered throughout the Eastern Mediterranean region.[216] The arrival of Syrian traders in Egypt during the Middle Kingdom is described earlier in this book.[217]

Sinuhe was not the only Egyptian to participate in wars fought in Syria. The Ancient Egyptian maritime forces of the Middle Kingdom could pick and choose in which Syrian wars they preferred to participate. The biography of the noble Sebek-khu, from Abydos, describes how he led a reserve force during a battle fought by Senusret III in Syria.

> *His majesty proceeded northward, to overthrow the Asiatics. His majesty arrived at a district, Sekmem was its name. His majesty led the good way in proceeding to the palace of 'Life, Prosperity and Health', when Sekmem had fallen, together with Retjenu (Syria) the wretched, while I was acting as rearguard. Then the 'living-ones' of the army mixed in, to fight with the Asiatics. Then I captured an Asiatic, and had his weapons seized by two 'living-ones' of the army, for one did not turn back from the fight, but my face was to the front, and I gave not my back to the Asiatic.*[218]

During the Second Intermediate Period, the rulers of Upper Egypt were cut off from the Mediterranean Sea, but in the north the new Hyksos rulers of the 15th Dynasty maintained at least part of the trade with Syria. The Hyksos rulers of Egypt probably maintained the Egyptian maritime forces, although there are no surviving texts that confirm their power. Surviving records show that with the rise of future kings of the New Kingdom, the Hyksos fleet was in decline. The biography of Ahmose (son of Ebana) describes how King Ahmose of the 18th Dynasty defeated the Hyksos and captured the city of Avaris; however, the same biography subsequently describes an attack on Naharin (northern Euphrates) under Thutmose I.[219] Like the expedition under Senusret III, described above, Thutmose I's expedition would have used the flexibility, mobility and reach of the Egyptian maritime forces to project power into northern Syria.

> *After this one proceeded to Retjenu to vent his wrath throughout the foreign lands. When his majesty approached Naharin, his majesty found that enemy. He arranged the companies. Then his majesty made a great slaughter among them. There was no limit to the living captives which his majesty brought away in his victory. While I was at the head of our army, his majesty saw that I was brave. I brought a chariot, its horses and the one upon it as a living captive, they were presented to his majesty. Then one rewarded me with gold a further time.*[220]

The biography of Ahmose-Pen-Nekhbet, although fragmentary, describes another expedition to Syria, extending as far as the northern Euphrates, during the reign of Thutmose II.[221] This was perhaps the inspiration for the important expeditions to the Lebanon and Syria by Thutmose III. Many people are aware that the Ancient Egyptians conducted military operations in Syria, some may also have heard mention of King Thutmose III at the Battle of Megiddo, but few will have heard of how Egyptian naval forces influenced events ashore during Thutmose III's subsequent operations in the Lebanon.[222]

The history of Syria aptly demonstrates the strategic advantage that lay with the maritime powers that controlled the Eastern Mediterranean. During the Late Bronze Age, Thutmose III's ability to maintain sea control in these waters enabled him to effectively project Egyptian military power ashore in the Lebanon. It is a truism, confirmed during the Crusades, World War I and the 1973 Arab-Israeli War, that armies cannot operate effectively in the Syria littoral without fleets controlling the adjacent Mediterranean Sea.

By the time of Thutmose III, the Egyptians had a long-established overland trade route across the Sinai, coupled with a strong influence over the cities of southern Palestine. They also had a mature maritime trading relationship with the coastal cities of the Lebanon – especially Byblos.

Thutmose III's first campaign (Year 23 of his reign) commenced with a long gruelling march through the Sinai and Palestine. His army subsequently defeated a coalition of city-states and towns under Mitannian (north-east Syrian) leadership, at the Battle of Megiddo.[223] Much tribute was collected and local rulers made contributions that helped to supply the Egyptian armies in the field. Three mopping-up campaigns over subsequent years (Years 24 to 28) solidified Egypt's position as it paved the way for a more permanent occupation of Palestine.[224] Stabilisation of the region, however, remained elusive as the Mitanni continued to exercise power and influence among the local princes of the Lebanon and Syria. One of these, the Prince of Kadesh, led an anti-Egyptian coalition based around the Orontes River and Naharin (the region around the upper Euphrates River in Syria). Indeed, following the Battle of Megiddo, the Mitanni and their supporters became formidable opponents whose insurgency tactics achieved local political successes against the less flexible Egyptian armies.[225]

Thutmose III needed to change his strategy. Whereas the Egyptians could sustain small garrisons in Palestine and use much larger forces in Egypt as a reserve to coerce allies and defeat rebels, they were not capable of projecting Egyptian military power overland into the Lebanon or Syria. Not only would an army transiting through Palestine be a logistic burden for the cities and towns that it went through, it was subject to potential

attacks from anti-Egyptian insurgents. In addition, the transit time through Palestine would reduce the effective campaigning seasons for the Egyptian forces to such an extent that they would be incapable of operating against the Mitanni heartland in north-east Syria. Sea power provided the answer.

Thutmose III's fifth to eighth campaigns (Years 29 to 33) in Syria-Palestine are classic examples of expeditionary operations.[226] While the Egyptians controlled the Eastern Mediterranean Sea they were able to project power ashore, utilising mobility, access, flexibility and reach to effectively 'fire' the Egyptian army at 'targets' on shore across the Lebanon and into north-east Syria. 'Fighting remained landbased, but was now dependent upon the sea routes off the coastline of the Lebanon, with Byblos and other ports serving as major staging points and supply depots.'[227]

Eastern Mediterranean Area of Operations c. 1450 BCE

The city of Tunip[228] was sacked during Thutmose III's fifth campaign (Year 29). Some 329 of Tunip's soldiers were captured, with many to be hired later as Egyptian mercenaries. Large quantities of silver, gold, bronze and copper were taken as plunder. Two ships were also captured off the coast and their cargoes taken. Of course ships were required to carry the great amounts of captured cargoes, slaves and tribute back to Egypt.

> *Now, ships were taken … laden with everything, with male and female slaves, copper, lead, emery and everything good. Afterward his majesty returned (from the campaign) travelling by boat to Egypt, to his father Amon-Re (in Luxor), his heart in joy.*[229]

The Egyptian fleet was central to the successful conduct of this campaign.

On his sixth campaign, having established port facilities on the Lebanese coast, Thutmose III was able to travel from Egypt with his fleet and conduct expeditions to deter the rulers of Kadesh, Sumur and Arvad. Other cities were coerced to let their sons be raised in Egypt, to be Egyptianised.

> *Year 30. Now his majesty was in the land of Retjenu (Syria) upon the sixth naval expedition of his majesty's victory.*[230]

The seventh campaign was directed at the coastal cities of the Lebanon, starting by capturing and plundering the port city of Ullaza. Thutmose III then sailed along the coast, obtaining the submissions and tribute from the princes of each city and town en route.

> *Now every harbour at which his majesty arrived supplied sweet bread and other assorted breads, with oil, incense, wine, honey and fruit … they were abundant beyond everything, beyond that which was known by his majesty's forces.*[231]

After assessing the harvest of Syria and taking a proportion into the Egyptian treasury, Thutmose III sailed back to Egypt.

Having subdued the coastal cities of the Lebanon, Thutmose III was now able to embark upon his eighth and perhaps greatest campaign (Year 33). He led an Egyptian expedition to conquer the Mitanni strongholds in north-east Syria. After travelling by sea from Egypt through the port of Arvad, the expedition then marched north to Aleppo and then into the land of Naharin. The King of Mitanni and the rulers of allied city-states were defeated in a series of battles at Naharin, Wan (west of Aleppo) and Carchemish.

> *Year 33. Now, his majesty was in the land of the Retjenu. He arrived … He established a stele east of this water (Euphrates). He established another beside the stele of his father, the King of Upper and Lower Egypt, Aakheperkaura (Thutmose I).*[232]

> *Now his majesty travelled north capturing the towns and laying waste the settlements of that foe of wretched Naharin. … he pursued after them an* iter *(a nautical measure of length) of sailing, not one looked behind him, but they fled, forsooth, like a herd of mountain goats. Yes, the horses fled …*[233]

Three princes, 30 of their wives, 80 warriors and 606 slaves (men, women and children) were taken prisoner after the Naharin battle. The annals for that year also include the tribute from the Syrian coastal cities.

> *Now, these harbours were supplied with everything according to their dues, according to their annual contract, together with the impost of Lebanon according to the annual contract with the rulers of Lebanon …*[234]

The expedition to Naharin included a bridge of boats that the Egyptians used to cross the mighty Euphrates River.

> *Now my majesty travelled to the ends of Asia. I caused many ships to be constructed of cedar on the hills of the God's Land (Lebanon), in the presence of the mistress of Byblos, they being placed on chariots (carts) pulled by oxen. They travelled before my majesty to cross that great river that flows between this foreign land and Naharin.*[235]

It is most likely that the Egyptian naval forces were responsible for this early feat in military engineering. Rapid movement of relatively small forces on land was the key to the successful conduct of these operations.

Thutmose III's campaign now turned south; sailing downstream on the Euphrates, the Egyptians attacked the cities of Niy, Sendjar, Takhsy and once again Kadesh.[236] Travelling south through the Orontes Valley, the Egyptian expedition returned to the Lebanese coast.

Thus the capability of the Egyptian forces to project power deep into Mitanni territory was demonstrated. Not only did the King of Mitanni give tribute to Thutmose III, but the major powers of the day recognised the might of Egypt. The Babylonian, Assyrian and Hittite kings now sent tribute to the Egyptians in the Lebanon. The following year more Syrian cities surrendered to the Egyptians adding to the list of tribute, while tribute was also received from the ruler of Cyprus.

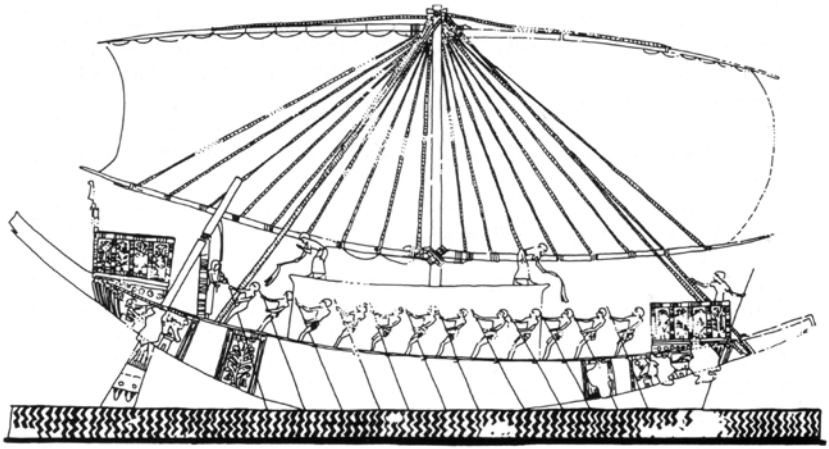
Expeditionary operations are usually most effective when they are limited to distant campaigns of short duration, against varied opponents and with clear aims. They are by their nature also politicised. They are not efficient if they are used as a substitute to the taking and holding of land as an occupation force.

The campaigns of Thutmose III provide an early example of the problems that had to be overcome when conducting expeditionary operations. While the Egyptians, under Thutmose III, were able to garrison and occupy Palestine they did not have the military or economic capabilities, or the political will to permanently occupy all of Syria. After Thutmose III's eighth campaign, the forces of the Mitanni and their allies adopted a typical insurgency strategy against the Egyptians. They refused to pay tribute and revolted when and where the Egyptians were weakest, while their rulers submitted when the Egyptian expeditions arrived in force. Syria was neither at peace nor at war, while cities in revolt and Egyptian reprisal campaigns almost became annual events. Thutmose III's successors inherited this unsatisfactory situation in Syria, with Amenhotep II having to fight at least two campaigns in the region.

> *His majesty was in the city of Shemesh-Edom; his majesty furnished an example of bravery there; his majesty himself fought hand to hand. Now, he was like a fierce-eyed lion, smiting the countries of Lebanon.*[237]

The Mitanni rulers of city-states may have been morally justified in opposing Egyptian political domination of trade in Syria-Palestine, but the Egyptians themselves most likely saw their intervention as one of creating order where they saw chaos. Thutmose III probably thought he acted as a force for good in the region. Sea power underpinned much of the Egyptian Empire, while the associated control of sea trade generated the wealth and luxury that characterised an Egyptian 'Golden Age'.

Thutmose III had set the scene for the relations between Egypt and Syria for the remaining periods considered by this study, but his efforts to destroy the influence of Mitanni in northern Syria and replace it with an Egyptian Empire was only one of the contributing factors that led to major changes to the trading patterns of the Eastern Mediterranean.



Sailing vessel from the tomb of Rekhmire at Thebes

After these conquests, Cyprus as well as representatives from a number of other Eastern Mediterranean locations, payed tribute to Thutmose III. His hymn of victory boasts:

> *I have come, causing thee to smite the western land, Keftiu (Crete) and Cyprus are in terror. … The lands of Mitanni tremble under fear of thee. I have come, causing thee to smite those who are in the isles; those who are in the midst of the Great Green (Sea) hear thy roarings.*[238]

It was about this time (1400 BCE) that the elites of many Eastern Mediterranean cities were becoming more powerful. They were able to produce prestige goods that others desired, while they themselves desired prestige goods from abroad. These new Late Bronze Age elites on the Ionian coast, Cyprus, Crete, the Greek islands and in parts of mainland Greece presented a new resource for the maritime traders of the Eastern Mediterranean to exploit and as a consequence the maritime trade routes were significantly altered.[239] Sailing conditions in the Eastern Mediterranean favoured those sailing along the Syrian coast from Egypt to Byblos, whereas a return voyage along

the Sinai coast south of Gaza would have been extremely difficult. Egyptian ships may have headed directly west from Byblos in order to catch the northerly winds south of Cyprus that assisted them on their return journey to Egypt.[240] It is likely that maritime communications between Egypt, Byblos and Cyprus had been occurring for sometime; however, without suitable products for elite consumption in Egypt, the Cypriot part of the journey would not have involved much trade. The rise of the new elites in other Late Bronze Age city-states opened more opportunities for trade. The new maritime trade routes in the Eastern Mediterranean formed a large trade circle, with the majority of ships sailing anticlockwise with the prevailing winds around the Mediterranean Sea from Egypt, to the Syrian coast, to Cyprus and the Southern coast of Turkey, to the Greek islands, to Crete, to the Libyan coast and back to Egypt.[241] The archaeological material uncovered at sites around the Eastern Mediterranean has imports that support this circular trade route.

How did this new trading environment affect Egyptian sea power? It is likely that the increased movement of Libyans into the western Delta, during the Ramessid Period, was related to this emerging maritime trade route from Crete to the Libyan coast. The Libyans were no longer nomads from Egypt's western desert, they now included people called Meshwesh and Libu who apparently came from the regions much further west, perhaps from the regions of Cyrenica or Tripolitania in modern Libya. The new Libyan arrivals most likely stayed in Egypt after travelling on trading vessels that arrived in the western Delta and settled down and mixed with the Egyptian communities in the region. The western maritime trade route helps explain the wars the Egyptians had to fight against the Libyans and Sea People throughout much of the Ramessid Period.

At the same time, the Ramessid kings of Egypt tried to maintain their empire in Syria, which relied upon their maintenance of their trade routes and communications in the Mediterranean Sea. The Egyptians were forced to wage a long war of attrition in northern Syria and it may be seen that the empire policy was an over-commitment of Egyptian forces with no likelihood of military victory. This highlights the fact that during the later part of the New Kingdom, the Ancient Egyptian maritime forces were misused. The ability of maritime forces to influence events ashore often allows them to 'punch well above their weight', to use a modern phrase; however, when maritime forces are used for expeditions over long periods with no clear political or strategic outcome, they may find that they are operating in a quagmire, where there is no 'knockout blow'. After the expeditionary campaigns of Thutmose III in northern Syria, the Egyptians became bogged-down in a war of attrition with their Hittite neighbours. The Egyptian maritime forces were far too light to be involved in a heavy war of attrition, or a 'cold war' type stand-off, that was to be the feature of the Egyptian Empire in the north.

Perhaps the later 18th Dynasty kings, Amenhotep III and his son Akhenaten, realised the difficulty in maintaining an Egyptian Empire in northern Syria, for it was during their reigns that detailed records of attempts to find a long-term political solution to the empire have survived. The Amarna Letters describe many diplomatic intrigues.[242] In one example, the Egyptians do not send a maritime force in time to help an allied Syrian king when he is attacked by the Hittites. The letters do confirm that the Egyptian influence in Byblos was still considered essential for their dominance of the region and perhaps the interpretation of peace during these reigns was more apparent than real. Our interpretation of these peaceful reigns are very much influenced by the chance survival of the Amarna Letters, while records of military operations have not survived. It is possible that the emphasis on the sun god Aten replaced much of the military grandstanding in the artistic conventions of the time.

Mediterranean maritime trade routes during the later New Kingdom period

The Ramessid kings saw no option to the use of military force in their Syrian empire. Expeditions were necessary not only to defeat any enemies, but also to extract tribute, to threaten potential rebels with a show of force, or as a visible progression of royal authority and power through the cities and countryside. For example, Rameses I conducted a campaign in Syria, while his son Sety I mentions his impost on Lebanon during his Syrian campaigns:

> *Inspection of the chiefs of Lebanon, who are cutting down cedars for the great barge of the 'Beginning of the River', … likewise for the great flagstaves of Amun, …*[243]

Rameses II describes his numerous campaigns against the Hittites, including his famous Battle of Kadesh (Year 5 of his reign). Rameses II's victory against the Hittites at the Battle of Kadesh was not as decisive as he would have liked. The campaigns continued for another 12 years and then during Year 21 of his reign, Rameses II signed a treaty with the Hittite king. The treaty enshrining Egyptian and Hittite spheres of influence in northern Syria helped to establish a militarised frontier between the two major powers.[244] The treaty probably did not last long after the old king's death, for the 20th Dynasty king, Rameses III, described further campaigns in Syria against the Hittites in his mortuary temple at Medinet Habu.

By the Ramessid Period, the Egyptians had developed sophisticated logistic support arrangements in the region, forcing local cities to pay tribute in kind that could support the necessary Egyptian garrison troops. In addition, local workshops probably produced much of the everyday necessities for the Egyptian army. Egyptian maritime forces were relegated to the transportation of soldiers, commanders and supplies to the northern Syrian war zone.

Papyrus Harris describes the maritime forces that Rameses III could provide for his Mediterranean fleet:

> *I made for thee transports, galleys, and barges, with archers equipped with their arms, upon the sea. I gave to them captains of archers, and captains of galleys, manned with numerous crews, without number, in order to transport the products of the land of Zahi and the countries of the ends of the earth to thy great treasuries in 'Victorious Thebes'.*[245]

The Ancient Egyptian maritime forces also maintained security for shipping operations along the Egyptian and the Syrian coasts. It is less likely they protected shipping operations elsewhere in the Eastern Mediterranean, except perhaps by placing Egyptian marines onboard their own vessels. Egyptian seagoing ships visited many important cities of the Eastern Mediterranean on diplomatic/trading missions, or perhaps for a few specific goods required for the Egyptian market. The Bentresh Stele discovered at Karnak Temple describes an expedition to Bentresh on the Syrian coast:

> *His majesty commanded to cause Khonsu, the plan maker in Thebes, (a statue of the god), to proceed to a great ship, five transports, numerous chariots, and horses of the west and the east. This god arrived in Bekhten in a full year and five months. Then the chief of Bekhten came, with his soldiers and his nobles, before Khonsu, the plan maker. He threw himself upon his belly, saying: 'You come to us, you are welcome with us, by command of King Usermaatra Setepenra (Rameses II).*[246]

However, much of the trade in the Eastern Mediterranean was conducted by non-Egyptian elites who operated tramping merchant vessels, picking up and dropping off goods and people, as they tramped anticlockwise around the sea.[247]

As the defence of Egypt became more important, the Egyptian maritime forces were increasingly unable to support the Egyptian army in Syria. By the reign of Rameses XI, (1099-1069 BCE), the Egyptian maritime forces were neither able to project power in the Mediterranean, nor were they able to provide protection to their trade along the Syrian coast. 'The Report of Wenamun', although a literary work, provides insight into the dangerous conditions in the Mediterranean Sea at the end of the New Kingdom. Wenamun was robbed on his way to Byblos and even though he was an emissary of the Egyptian temple at Karnak, he found that the Egyptian influence was no longer strong in the region. It may be that the lack of an Egyptian fleet left Egyptian prestige in the region in tatters. He is then blown off course to Cyprus on the return trip to Egypt and unfortunately the remainder of the report is lost. If elements of this story are true, Wenamun must have made a safe return to Egypt to have recorded the journey. As 'The Report of Wenamun' has many details concerning Egyptian maritime trade, security and prestige in the Mediterranean Sea, a translation of almost the entire document is reprinted here for convenience.

> *Year 5, forth month of summer, day 16, the day of departure of Wenamun, the Elder of the Portal of the Temple of Amun, lord of the thrones-of-the-two-lands, to fetch timber for the great noble bark of Amun-Ra, king of gods, which is upon the river and is called 'Amun-user-he'. …*
>
> *I stayed until the forth month of summer in Tanis. Then Smendes and Tentamun sent me off with the ship's captain Mengebet, and I went down upon the great sea of Syria in the first month of summer, day 1. I arrived at Dor, a Tjeker (Sea People) town; and Beder, its prince, had fifty loaves, one jug of wine, and one ox-haunch brought to me. Then a man of my ship*

fled after stealing one vessel of gold worth 5 deben, four jars of silver worth 20 deben, and a bag with 11 deben of silver; total of what he stole: gold 5 deben, silver 31 deben.

That morning, when I had risen, I went to where the prince was and said to him: 'I have been robbed in your harbour. Now you are the prince of this land, you are the one who controls it. Search for my money! Indeed the money belongs to Amun-Ra, king of gods, the lord of the lands. … He said to me: 'Are you serious? Are you joking? Indeed, I do not understand the demand you make to me. If it had been a thief belonging to my land who had gone down to your ship and stolen your money, I would replace it for you from my storehouse, until your thief, whatever his name, has been found. But the thief who robbed you, he is yours, he belongs to your ship. Spend a few days here with me; I will search for him.'

I stayed nine days moored in his harbour. Then I went to him and said to him: 'Look, you have not found my money. Let me depart with the ship captains, with those who go to sea.' … [The next eight lines are broken. Wenamun decides to depart. He passes Tyre and approaches Byblos. He seizes thirty deben of silver from a ship belonging to the Tjeker on the way. He tells the ship owners that he will keep the money until his money is found. The Tjeker now see Wenamun as a pirate.]

They departed and I celebrated in a tent on the shore of the sea in the harbour of Byblos. And I made a hiding place for Amun-of-the-Road and placed his possessions in it. Then the prince of Byblos sent to me saying: 'Leave my harbour!' I sent to him, saying: 'Where shall I go? … If you have a ship to carry me, let me be taken back to Egypt.' I spent twenty-nine days in his harbour, and he spent time sending to me daily to say: 'Leave my harbour!'

Now while he was offering to his gods, the god took hold of a young man of his young men and put him in a trance. He said to him: 'Bring the god up! Bring the envoy who is carrying him! It is Amun who sent him. It is he who made him come!' Now it was while the entranced one was entranced

that night that I had found a ship headed for Egypt. I had loaded all my belongings into it and was watching for the darkness, saying: 'When it descends I will load the god so that no other eye shall see me.'

Then the harbour master came to me, saying: 'Wait until morning, says the prince!' I said to him: 'Was it not you who daily took time to come to me, saying 'Leave my harbour'? Do you now say: 'Wait this night,' in order to let the ship that I found depart, and then you will come to say: 'Go away'?' He went and told it to the prince. Then the prince sent to the captain of the ship, saying: 'Wait until morning, says the prince.'

When morning came, he sent and brought me up, while the god rested in the tent where he was on the shore of the sea. I found him seated in his upper chamber with his back against a window, and the waves of the great sea of Syria broke behind his head. I said to him: 'Blessings of Amun!' He said to me: 'How long is it to this day since you came from the place where Amun is?' I said to him: 'Five whole months till now.' He said to me: 'If you are right, where is the dispatch of Amun that was in your hand? Where is the letter of the High Priest of Amun that was in your hand?' I said to him: 'I gave them to Smendes and Tentamun.' Then he became very angry and said to me: 'Now then, dispatches, letters you have none. Where is the ship of pinewood that Smendes gave you? Where is its Syrian crew? Did he not entrust you to this foreign ship's captain in order to have him kill you and have them throw you into the sea? From whom would one then seek the god? And you, from whom would one seek you?' So he said to me.

I said to him: 'It is not an Egyptian ship? Those who sail under Smendes are Egyptian crews. He has no Syrian crews.' He said to me: 'Are there not twenty ships here in my harbour that do business with Smendes? As for Sidon, that other place you passed, are there not another forty ships there that do business with Werekter and haul to his house?' I was silent in this great moment. Then he spoke to me, saying: 'On what business have you come?' I said to him: 'I have come in quest of timber for the great noble bark of Amun-Ra, king of gods. What your father did, what the father of your father did, you too will do it.' So I said to him. He said to me: 'True,

they did it. If you pay me for doing it, I will do it. My relations carried out this business after Pharaoh had sent six ships laden with the goods of Egypt, and they had been unloaded into their storehouses. You, what have you brought for me?'

He had the daybook of his forefathers brought and had it read before me. They found entered in his book a thousand deben of silver and all sorts of things. He said to me: 'If the ruler of Egypt were the lord of what is mine and I were his servant, he would not have sent silver and gold to say: 'Carry out the business of Amun.' It was not a royal gift that they gave to my father! I too, I am not your servant, nor am I the servant of him who sent you! If I shout aloud to the Lebanon, the sky opens and the logs lie here on the shore of the sea! Give me the sails you brought to move your ships, loaded with logs for (Egypt)! Give me the ropes you brought to lash the pines that I am to fell in order to make them for you … that I am to make for you for the sails of your ships, or the yards may be too heavy and may break, and you may die in the midst of the sea. For Amun makes thunder in the sky ever since he placed Seth beside him! Indeed, Amun has founded all the lands. He founded them after having first founded the land of Egypt from which you have come. Thus craftsmanship came from it in order to reach the place where I am! What are those foolish travels they made you do?'

I said to him: 'Wrong! These are not foolish travels that I am doing. There is no ship on the river that does not belong to Amun His is the sea and his the Lebanon of which you say, 'It is mine.' It is a growing ground for Amun-user-he, the lord of every ship. Truly it was Amun-Ra, king of gods, who said to Herihor, my master" 'Send me!' And he made me come with this great god. But look, you have let this great god spend these twenty-nine days moored in your harbour Did you not know that he was here? Is he not he who he was? You are prepared to haggle over the Lebanon with Amun, its lord? As to your saying, the former kings sent silver and gold: If they had owned life and health, they would not have sent these things. It was in place of life and health that they sent these things to your fathers!

But Amun-Ra, king of gods, he is the lord of life and health, and he was the lord of your fathers! They passed their lifetimes offering to Amun. You too, you are the servant of Amun!

If you say 'I will do' to Amun, and will carry out his business, you will live, you will prosper, you will be healthy; you will be beneficient to your whole land and your people. Do not desire what belongs to Amun-Ra, king of gods! Indeed, a lion loves his possessions! Have your scribe brought to me that I may send him to Smendes and Tentamun, the pillars Amun has set up for the north of his land; and they will send all that is needed. I will send him to them, saying: 'Have it brought until I return to the south; then I shall refund you all your expenses.' ' So I said to him

He placed my letter in the hand of his messenger; and he loaded the keel, the prow-piece, and the stern-piece, together with four other hewn logs, seven in all, and sent them to Egypt. His messenger who had gone to Egypt returned to me in Syria in the first month of winter, Smendes and Tentamun having sent: four jars and one kakmen-*vessel of gold; five jars of silver; ten garments of royal linen; ten* khered *garments of fine linen; five hundred ropes; twenty sacks of lentils; and thirty baskets of fish. And she had sent to me: five garments of fine linen; five* khered *garments of fine linen; one sack of lentils; and five baskets of fish. The prince rejoiced. He assigned three hundred men and three hundred oxen, and he set supervisors over them to have them fell the timbers. They were felled and they lay there during the winter. In the third month of summer they dragged them to the shore of the sea. … [After further difficult audience with the prince of Byblos, Wenamun finally is prepared to depart.]*

I went off to the shore of the sea, to where the logs were lying. And I saw eleven ships that had come in from the sea and belonged to the Tjeker who were saying: 'Arrest him! Let no ship of his leave for the land of Egypt!' Then I sat down and wept. And the secretary of the prince came out to me ands said to me: 'What is it?' I said to him: 'Do you not see the migrant birds going down to Egypt a second time? Look at them travelling to the

cool water! Until when shall I be left here? For do you not see those who have come to arrest me?' He went and told it to the prince …

When morning came, he had his assembly summoned. He stood in their midst and said to the Tjeker: 'What have you come for?' They said to him: 'We have come after the blasted ships that you are sending to Egypt with our enemy.' He said to them: 'I cannot arrest the envoy of Amun in my country. Let me send him off, and you go after him to arrest him.' He had me board and sent me off from the harbour of the sea. And the wind drove me to the land of Alasiya (Cyprus). Then the town's people came out against me to kill me. But I forced my way through them to where Hatiba, the princess of the town was. I met her coming from one of her houses to enter another. I saluted her and said to the people who stood around her: 'Is there not one among you who understands Egyptian?' And one among them said: 'I understand it.' I said to him: 'Tell my lady that I have heard it said as far away as Thebes, the place where Amun is: 'If wrong is done in every town, in the land of Alasiya right is done.' Now is wrong done here too every day?'

She said: 'What is it you have said?' I said to her: 'If the sea rages and the wind drives me to the land where you are, will you let me be received so as to kill me, though I am the envoy of Amun? Look, as for me, they would search for me till the end of time. As for this crew of the prince of Byblos, whom they seek to kill, will not their lord find ten crews of yours and kill them also?' She had the people summoned and they were reprimanded. She said to me: 'Spend the night … [the rest of the report is lost] [248]

'The Report of Wenamun' is perhaps the most important record detailing of Egyptian maritime operations in the Mediterranean Sea. But it must be remembered that it describes a time, at the end of the New Kingdom, when Egyptian sea power no longer existed in the region. As such the report is an aberration, which reveals the problems associated with declining levels of maritime security.

CHAPTER 10 — AN OVERVIEW OF ANCIENT EGYPTIAN MARITIME FORCES

From the previous discussion of Egyptian maritime operations it may be seen that the modern theoretical framework for maritime operations applies equally as well to the historical experience in Ancient Egypt. Even though many of the maritime operations may no longer be visible in the surviving records, those that do exist show that the Ancient Egyptian experience included approximately 50 per cent military, 30 per cent constabulary and 20 per cent diplomatic operations, over a period of some 2000 years. The table below provides a summary of the maritime roles for each of the major periods of Pharaonic history.

	Military (per cent)	Constabulary (per cent)	Diplomatic (per cent)	Total Number
Prehistoric & Archaic Periods	100	–	–	8
Old Kingdom	30	37	33	30
First Intermediate Period	55	45	–	9
Middle Kingdom	49	30	21	43
Second Intermediate Period	60	40	–	5
New Kingdom	59	21	20	61

Table 3: Percentages of each Ancient Egyptian maritime role

The military tasks are similar to those of today, except perhaps there is a greater emphasis on internal conflict or civil wars in the Ancient Egyptian experience. The lack of a peer competitor or rival state power meant that Egyptian sea power dominated activities along the Nile, the Red Sea and the Eastern Mediterranean, and as a result the concept of a decisive conflict between rival maritime powers did not arise. Ancient Egyptian constabulary tasks were very similar to those of today, although state building activities occurred to a much greater extent than it does today. Diplomatic tasks were also similar to the modern ones, although by their very nature they are probably under-represented in the surviving sources. Assuming that Ancient Egyptian maritime forces remained continuously active, then there were at least 1600 years of 'peaceful' activities where Egyptian sea power was employed mostly for constabulary and diplomatic tasks. Statistically, based on the yearly events up to the beginning of the New Kingdom, this would give 95 to 98 per cent of the time in peace and 2 to 5 per cent of the time 'at war'.[249] During the New Kingdom there is a rise in the number of years when Egypt

was at war, essentially due to the campaigns and the maintenance of the Egyptian Empire in northern Syria, but even then it may be seen that 86 per cent of the time Egypt was in peace and 14 per cent of the time at war. Of course these statistics do not reflect the levels of commitment required during times of war, nor do they reflect the size of the forces involved in times of war. It seems likely that the commitment to maintain an Egyptian Empire in northern Syria led to the employment of Egyptian forces in what would today be called a 'continental' strategy. As Egypt was at war for long periods during the New Kingdom, they needed to increase their military efforts with little if any long-term strategic effects. Prior to the New Kingdom, the Egyptian maritime forces were typically involved in expeditionary style operations, where they could choose to conduct an operation for a desired strategic effect or not, depending upon the circumstances. This choice was just not possible later when the Egyptians had to maintain their empire.

	Years at War	Percentage at War	Years in Peace	Percentage in Peace	Total Years
Old Kingdom	9	2	517	98	526
First Intermediate Period	5	5	100	95	105
Middle Kingdom	21	5	384	95	405
Second Intermediate Period	3	3	97	97	100
New Kingdom	66	14	415	86	481

Table 4: Recorded years in peace and war for Ancient Egypt

Another important difference is that Ancient Egyptian military and constabulary tasks involved activities both at sea and on land, with Egyptian maritime forces operating in what would today be called a 'joint' environment. The Ancient Egyptians always operated in a joint environment – they were not separated into naval and military components – so the use of maritime forces on land was a logical part of their employment. In comparison, the use of sailors ashore was commonplace during the 19th and early 20th centuries CE, prior to the demise of naval landing parties during the Cold War.[250]

Regional comparisons reveal the changing influence of Ancient Egyptian maritime forces in their maritime domain over time. As the priorities and political realities of the Egyptian kings changed, so did their employment of maritime forces. The table below provides a summary of the regions where Ancient Egyptian maritime operations occurred for each of the major periods of Pharaonic history.

	Egyptian Nile (per cent)	Nubian Nile (per cent)	Red Sea (per cent)	Mediterranean Sea (per cent)	Recorded Operations[251]
Prehistoric and Archaic Periods	75	–	25	–	4
Old Kingdom	7	22	56	15	27
First Intermediate Period	100	–	–	–	9
Middle Kingdom	30	33	28	9	43
Second Intermediate Period	100	–	–	–	5
New Kingdom	26	31	15	28	61

Table 5: Percentages of each region for Ancient Egyptian maritime operations

The distribution of Ancient Egyptian maritime operations throughout each region highlights the inability of the Egyptians to project power abroad during the intermediate periods, for when the central government and bureaucracy was weak they were unable to maintain the strong maritime forces that could project power and influence political events at home and abroad.

The increase in the number of operations in the Mediterranean during the New Kingdom reflects the activities conducted to gain and hold the Egyptian Empire in northern Syria. It also reflects the growing importance of the Mediterranean Sea for trade and communications between Late Bronze Age societies. Although trade between the Late Bronze Age elites, including the Egyptians, was extensive, it never involved the mass distribution of commercial goods that characterised the Iron Age in the Eastern Mediterranean.252 Rameses III was able to defeat the Sea People in the Egyptian Delta but the same or similar Sea People did manage to destroy many of the Late Bronze Age societies of the Eastern Mediterranean.[253] Either the Late Bronze Age cities were captured and physically destroyed or their trade was disrupted to such a degree that the social fabric of Late Bronze Age collapsed. This Eastern Mediterranean collapse contributed to another period of internal conflict in Egypt, where once again Egypt was separated into a number of rival states: the Third Intermediate Period.

Practicing fighting skills on papyrus boats

CHAPTER 11 — THE ORIGIN OF MARITIME FORCES

Using the Ancient Egyptian experience, it is possible to make some judgments about the origin of maritime forces. The Egyptians did not sit down one day and decide that they should build a maritime force or develop Egyptian sea power. The process was not one involving the application of a theoretical model, but rather one that flowed from the practical nature of Egyptian nautical activities. It was evolutionary, with relatively minor changes over many years, developed through applying their experience and practical knowledge of how best to build, maintain and utilise Egypt's maritime capabilities. In many ways, the Egyptian process was similar to the evolutionary development of British sea power from 1600 CE until the present day, as it relied upon its strengths as a maritime state. The foundations of Egyptian sea power were to be found in the technologies, experience, beliefs and ideologies of the people themselves, rather than arising from some theoretical construct. States with a continental ideological mindset find it difficult to develop and retain the infrastructure required to be a sea power for any length of time. The Egyptians were able to use their maritime forces in support of diplomacy, to protect commerce and to support land operations. Such versatility is a major attribute of maritime forces. They 'can easily change their military posture, undertake several tasks concurrently and be available for rapid re-tasking. They can present a range of flexible and well-calibrated political symbols.'[254]

The emerging social complexity of the Egyptian state was a critical factor in the origin of its maritime forces. Without an Egyptian state the maritime forces would have remained at the raider/trader stage, as it did throughout the rest of the Eastern Mediterranean during the periods covered in this book. The Minoan, Mycenian and other Eastern Mediterranean cultures were not unified into a large territorial state and although they could organise loose coalitions of raider/trader vessels they were not capable of organising maritime forces that rivalled the Egyptian state.[255] In turn, the Egyptian maritime forces were a significant factor in the formation of the Egyptian territorial state. Maritime forces engaged in diplomatic, constabulary and military operations made the Egyptian state possible. States make navies and navies make states.

Many scholars, particularly those with classical Greek training, equate the origin of maritime forces with the change from piracy to city-state navies in the Eastern Mediterranean. This is perhaps true, when only the Greek world during the 1st millennium BCE is considered, for piracy was the precursor to Ancient Greek sea power.[256] This book has established that it is often a characteristic for chiefdoms and

many city-states to include raider/traders, who were frequently engaged in acts of piracy. As the territorial states developed, they increased their control over the raiding/trading communities under their authority. As the central authorities, mostly kings and their families, suppressed the regional powers who were potential rivals, their control over the state's maritime resources also grew. Piracy, raiding and individual trading were activities undertaken by powerful elites looking for greater wealth and prestige; they were the activities that the king of a centralised state needed to suppress to gain and maintain power.[257]

The Ancient Egyptians were the only state that could wield a maritime force for strategic effect in the Eastern Mediterranean Sea and the Red Sea. The continental states of the Mitanni and the Hittites were unable to overcome Egyptian sea power. In fact such states were only able to effectively resist Egypt, during the later New Kingdom, when the Egyptians became engaged in a war of attrition for their empire in Syria. This supports the view that it is difficult to defeat a maritime power that can select where and when it wants to engage its enemies. The Egyptians conducted expeditionary operations, using manoeuvre to meet their diplomatic and strategic objectives, within relatively short timeframes, and with economy of both life and effort. Such expeditions did not always involve military action, but often achieved their strategic objectives by non-military coercion or just the presence of strong maritime forces. For example, Egyptian trading expeditions in the Red Sea relied upon the presence of their armed maritime forces to ensure that the people of Punt did not oppose their landings on the Horn of Africa and to guarantee that the terms of trade were favourable to the Egyptians. Expeditions without such protection, such as that of Wenamun's expedition to Byblos, were open to attack from raider/traders or pirates and had very little power to influence negations with their trading partners.[258]

Today, expeditionary operations are often misunderstood. The recent histories of Spanish, Dutch, British and American maritime empires have tended to link expeditionary operations with colonisation and imperialism. Numerous maritime strategists and naval historians have attempted to restate the experience of expeditionary operations in a form that shows some navies as seeing themselves as a 'force for good' in the modern world. Maritime expeditions need not be imperialist enterprises and the evidence suggests that it is when a state tries to occupy a region of instability that the limitations of maritime power are most clear. When the Egyptian military forces were refocused to support their long war in the northern Syria, they were relegated to troop transportation and logistic support duties in support of the long land campaigns of attrition and subsequently the ability to use the maritime force as a decisive manoeuvre element decreased. While maritime forces can be used to support land forces involved in a campaign of attrition, this is not normally the most effective use of maritime forces.

It is when maritime forces apply surprise and manoeuvre that they are able to utilise the enormous strategic potential of the seas.

The maritime forces that are capable of maritime power projection are equally useful for other operations in the maritime environment, including military operations in defence of the state and border protection. Late in New Kingdom Egypt, they were used in defence of the Egyptian Nile Delta against the successive invasions of the Sea People and Libyans. The technology of the seagoing ships could be adapted by varying the number of armed men onboard to almost any role. Unlike today, there were neither specialised warships nor merchant vessels in Ancient Egypt. While the Egyptian ships were capable of using armed men to fire against and board other vessels, warships were not designed specifically for fighting each other at sea; the ship's ram was an invention of the 1st millennium BCE.[259] Some vessels were larger, sleeker and faster than others, for example those used on Hatshepsut's Punt expedition or those depicted in Rameses III's sea battle; however, even these could be just as effectively used for troop transportation and logistics, trade protection and prestige operations.

Some may think that the extent of Ancient Egyptian sea power has been overstated in this study. This may be true to some extent, as it is often difficult to provide balance when one is considering the evidence available. Land forces were at least equally important to the forces at sea and at some times the most important element of Egyptian military operations; however, the joint use of armed troops and ships in the form of maritime forces were fundamental to the Egyptian methods of waging war. The Egyptian ships were not just used for transporting troops, their equipment and stores, as some scholars have suggested, but rather the ships formed part of the maritime approach to warfare – one that relied upon manoeuvre and the 'indirect' approach, rather than face the mass casualties of attrition warfare or the allusive search for the decisive battle. The example of the vizier Weni leading an amphibious assault behind the rear of an enemy force in Southern Palestine around 2300 BCE, confirms that the Egyptian maritime forces were used in complex manoeuvres, in this instance to inflict a significant defeat on the nomadic sand dwellers of the region.[260] The example of Ahmose (son of Ebana) during the capture of Avaris, also confirms the ability of the Ancient Egyptians to apply maritime manoeuvre in practice.[261] The city of Avaris was cutoff from the Mediterranean Sea by a maritime force and blockaded. Without support from its allies and probably with no ability to raise a fleet of their own, the Hyksos rulers of Avaris capitulated. These were not the only examples where the Egyptians used a maritime approach to warfare.

Nor were such military operations the centre of Egyptian maritime activities. The effective use of the Egyptian maritime forces at home and abroad for constabulary and diplomatic roles essentially set the scene for all later maritime forces and navies. Although they were undoubtedly capable of boarding and capturing merchant ships,

pirate vessels and raider/traders at sea, they seemed to have preferred to sweep the sea lanes clean by the very presence of their strong maritime forces and their accompanying prestige. As the only maritime power in the Mediterranean Sea, the Red Sea and along both the Nubian and Egyptian Nile, the Egyptian king effectively exercised what might be called 'soft power' throughout the region.[262] His expeditions were the source of wealth, power and prestige for the Egyptian elites and an opportunity for the elites who traded with him to gain wealth, power and prestige.

Modern history is replete with maritime activities of Western powers; the Spanish, the Dutch, the British, and the Americans all used their natural nautical and maritime skills to develop and maintain effective sea power. This was also true of the people of the world's first maritime state, the Ancient Egyptians. Egyptian sea power was the first in many things. It was the first to conduct 'joint' operations in the maritime environment, the first to use manoeuvre as an approach in warfare, the first to conduct maritime power projection expeditions to foreign lands, the first to conduct amphibious operations and the first to impose a blockade against enemy strongholds. The Egyptian maritime operations were the first that can be identified with the trinity of maritime roles: diplomatic, constabulary and military. And while they were the first to use 'soft power', their efforts to occupy northern Syria was one of the earliest instances where a maritime force was used in support of land forces struggling to maintain an Egyptian Empire – they were perhaps the first to witness the limitations of sea power in a long war of attrition.

Ancient Egyptian sea power confirms many of the fundamentals of maritime strategy as found in modern Western thought. There are a number of differences in interpretation that arise from this study and there are a number of glaring absences in the Egyptian record. The concepts of sea control and sea denial, along with operations against enemy forces, which have led to the pursuit of decisive naval battle and the ideal of sea supremacy, just did not arise in this study. Before the beginning of the 1st millennium BCE, Egypt was a unipolar maritime power in its maritime environment, without a potential rival maritime power, the issues of decisive naval battle and sea supremacy did not arise in the Ancient Egyptian domain.

APPENDIX 1 — TABLE OF ANCIENT EGYPTIAN MARITIME OPERATIONS (3700 TO 1069 BCE)

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
Predynastic and Early Dynastic Periods (before 2686 BCE)					
Predynastic	Egyptian Nile	Military – Raider/Traders	Ships and Raiders	Prehistoric Warfare. Painted scene with boats and fighting scene found at Hierakonpolis Tomb 100.	Quibell & Green, Hierakonpolis, 1902, pls. 75-79.
Late Predynastic	Egyptian Nile?	Military – Naval Battle	Ships and Raiders	Wars of State Formation. Gebel el Arak ivory knife handle with depiction of ships and naval battle.	Louvre, E11517.
Late Predynastic	Egyptian Nile?	Military – Raider/Traders	Ships and Marines?	Wars of State Formation. King Narmer's Palette. Decapitated enemies beneath a royal boat.	Cairo Museum, JE 30028.
1	Red Sea – Sinai	Military – Expedition	Ships and Marines?	King Den is depicted smiting Asiatics on Ivory Label found at Abydos.	British Museum, BM 55586.
Old Kingdom (2686-2160 BCE)					
3	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	King Djoser is depicted smiting his enemy on a rock inscription from Wadi Maghara in Sinai.	Hall, *Pharaoh Smites his Enemies*, 1986.
3	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	King Sekhemkhet is depicted smiting his enemy on a rock inscription from Wadi Maghara in Sinai.	Hall, *Pharaoh Smites his Enemies*, 1986.
4 to 6	Egyptian Nile	Constabulary – State Building	Ships and Marines?	The pyramid complexes of the Old Kingdom were constructed using numbers of men for mining expeditions and ships for transportation of stone.	Lehner, *The Complete Pyramids*, 1997.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
4	Nubian Nile	Military – Expedition	Ships and Marines?	King Sneferu, Year x+2, hacking-up the land of the Nubians, bringing 7000 live prisoners and 200,000 large and small cattle, building the wall of the Southland and Northland called 'Houses of Sneferu'.	BAR § I.146, Palermo Stone.
4	Mediterranean Sea	Diplomatic – Trade Protection	Ships and Marines?	Sneferu, Year x+2, building ships, bringing of 40 ships filled (with) cedar wood (from Lebanon).	BAR § I.146, Palermo Stone.
4	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	Sneferu is depicted smiting 'sand dwellers' on two rock inscriptions from Wadi Maghara.	BAR § I.168-69.
4	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	King Khufu is depicted smiting 'sand dwellers' on two rock inscriptions from Wadi Maghara.	BAR § I.176.
5	Mediterranean Sea	Diplomatic – Trade Protection	Ships and Marines?	Seagoing ships are depicted returning from Syria(?) during the reign of King Sahura.	Landström p. 63.
5	Red Sea – Punt	Diplomatic – Trade Protection	Ships and Marines?	Sahura, Year 13, Punt, 80,000 measures of myrrh, 6000 (measures) of electrum, 2600 rods (logs?).	BAR § I.161, Palermo Stone.
5	Red Sea - Sinai	Constabulary – State Building	Ships and Marines?	Sahura is depicted smiting 'sand dwellers' on a rock inscription from Wadi Maghara.	BAR § I.236.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
5	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	King Nyuserra is depicted smiting 'sand dwellers' on a rock inscription from Wadi Maghara.	BAR § I.250.
5	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	King Menkauhor is depicted smiting 'sand dwellers' on a rock inscription from Wadi Maghara.	BAR § I.263.
5	Red Sea – Sinai	Military/ Diplomatic – Expedition	Ship and Work Crew	Image of King Djedkara-Isesi smiting Asiatics, commissioned by Ship's Captain Nenekh-Khentikhet.	BAR § I.264-267; Urk I.55.
5	Red Sea – Punt	Military/ Diplomatic – Expedition	Ship and Work Crew	Reference to a dwarf from Punt brought by the seal-bearer Bawerdjed as tribute to King Djedkara-Isesi. From later biography of Harkhuf at Aswan.	BAR § I.353 Urk I.128-129.
6	Red Sea – Sinai	Military/ Diplomatic – Expedition	Army (with naval support?)	Image of King Pepy I smiting Asiatics, commissioned by Commander of the Army Ibdu.	BAR § I.302-303.
6	Egyptian Nile	Constabulary – State Building	Ships	Inscription of Weni from Abydos describes limestone blocks for his tomb coming from Turah. Reign of King Pepy I.	BAR § I.291-4, 306-15, 319-24; esp. § I.308: Urk I.99.
6	Red Sea – Sinai or Eastern Desert	Military – Expedition	Army of many thousands, (with naval support? Operations around river bends and islands)	Inscription of Weni from Abydos describes a series of conflicts to defeat and suppress rebels among the 'Asiatic sand dwellers' (of Sinai or the Eastern Desert/Red Sea Coast). Reign of King Pepy I.	BAR § I.291-4, 306-15, 319-24; & Urk I.98-110.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
6	Mediterranean Sea – Southern Palestine	Military – Expedition	Ships and Marines	Inscription of Weni from Abydos describes an attack using troop-ships against the land of Gazelle-nose (Palestine). Reign of King Pepy I.	BAR § I.291-4, 306-15, 319-24; esp. § I.315, 322 & Urk I.98-110.
6	Nubian Nile	Constabulary – State Building	Ships	Inscription of Weni from Abydos expeditions to southern quarries in southern Aswan and Nubia. Includes digging canals and collecting Nubian wood for shipbuilding. Reign of King Merenra.	BAR § I.291-4, 306-15, 319-24; esp. § I.321-4: Urk I.98-110: Lichtheim, AEL I.18-23.
6	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	Mining expedition to Wadi Maghara, under the god's treasurer Hepy. Reign of King Pepy II.	Gardiner & Peet, The Inscriptions of Sinai, Vol. II, 1955, No. 17.
6	Nubian Nile	Military – Expedition	Land forces apparently no ship(s) available past Elephantine?	The Tomb of Harkhuf at Aswan (el Hawa). He describes four journeys to Nubia under King Merenra and King Pepy II.	BAR § I.325-336, 350-53; esp. § I.358-359: Urk I.120-131: Lichtheim, AEL I.23-27.
6	Nubian Nile	Military – Expedition	By land or with ship(s)?	The Tomb of Pepynakht at Aswan (el Hawa). He describes two Nubian expeditions under Pepy II.	Lichtheim Autobiographies, No.3; BAR § I.355-360; esp. § I.358-359 & Urk I.131-135.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
6	Red Sea – Punt	Military – Punitive Expedition	Ship(s) for Punt, Land forces against Sand-dwellers	The Tomb of Pepynakht at Aswan (el Hawa). He travelled to the Red Sea to rescue the body of a nobleman who was killed by 'Asiatic sand dwellers' while building a ship for a voyage to Punt. Pepi II.	Lichtheim Autobiographies, No.3; BAR § I.355-360; esp. § I.365 & Urk I.131-135.
6	Mediterranean Sea	Diplomatic – Trade Protection	Ship(s)?	The noble Khnumhotep carries offerings to Khewy in his Tomb at Aswan (el Hawa). He went forth to Byblos. Pepy II.	BAR § I.361 (incorrect Kush); & Urk I.140-141.
6	Red Sea – Punt	Diplomatic – Trade Protection	Ship(s)?	The noble Khnumhotep carries offerings to Khewy in his Tomb at Aswan (el Hawa). He went forth (on trading missions) to Punt. Pepy II.	BAR § I.361; & Urk I.140-141.
6	Nubian Nile	Diplomatic – Trade Protection	Ship(s)?	The Tomb of Sabny, son of Mekhew, at Aswan No. 26 (el Hawa), describes how the Ship's Captain Intef gives information that his father Mekhu was dead in Nubia. He travels by land to Nubia to recover the body. Reign of Pepy II	BAR § I.362-374; esp. § I.365 & Urk I.135-140.
6	Nubian Nile	Diplomatic – Trade Protection	Ships and Marines	The Tomb of Sabny, son of Pepynakht, at Aswan (el Hawa). He travelled to Nubia with troops and scouts in two great barges to bring back obelisks. Probably under Pepy II.	Lichtheim *Autobiographies*, No.4; Habachi, *Sixteen Studies*, fig. 5.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
7 or 8	Egyptian Nile	Military – Civil War	Fleet of Ships and Marines	Tomb of the Ankhtifi at Mo'alla records his attacks against troops from Thebes and Coptos.	Vandier, Mo'alla; Lichtheim Autobiographies, No.7.
7 or 8	Egyptian Nile	Constabulary – State Building	Ships	Stele of Ity of Imyotru (Gebelein), he builds two ships to supply herds of goats, cattle and asses.	Lichtheim Autobiographies, No.10; Cairo No.20001.
First Intermediate Period (2160-2055 BCE)					
9 or 10	Egyptian Nile	Military – Naval Battle	Fleet of Ships and Marines	Tefibi, nomarch, Tomb III at Assyut. Commander of the Whole Land, under King Merykara. Naval Battle.	BAR § I.393-397, esp. § I.396; Griffith, Siut, Pls. 11&12.
9 or 10	Egyptian Nile	Constabulary – various	Fleet of Ships and Marines	Tefibi, nomarch, Tomb III at Assyut. Commander of the Whole Land, under King Merykara. State building and support to counterinsurgency operations.	BAR § I.393-397, esp. § I.396; Griffith, Siut, Pls. 11&12.
9 or 10	Egyptian Nile	Constabulary – various	Fleet of Ships and Marines	Khety I, son of Tefibi, nomarch, Tomb IV at Assyut. Commander of the Whole Land, under King Merykara. State Building & support to counterinsurgency operations and peacekeeping.	Lichtheim Autobiographies, No.8; BAR § I.398-404, esp. § I.401; Griffith, Siut, IV, p. 75, Pls. 13,14&20.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
9 or 10	Egyptian Nile	Constabulary – Border Protection	Ships and Marines	Khety II, nomarch, Tomb V at Assyut. Protecting the Borders of Egypt. Commander of Middle Egypt.	BAR § I.405-414, esp. § I.410-1; Griffith, Siut, Pl. 15.
Middle Kingdom (2055-1650 BCE)					
11?	Egyptian Nile	Military – Civil War	Marines?	Stele of soldier Fegu, Naqada, bowman (marine?). Also common for about 1/3 stela from Coptite and Theban nomes.	Lichtheim Autobiographies, No. 14.; Strasbourg 344.
11	Egyptian Nile	Military – Civil War	Ships and Marines?	Royal Stele. King Intef I attacks the Herakleopolitans and captures the Thinite nome and its fortresses.	BAR § I.421-423; & Cairo Museum 20512.
11	Egyptian Nile	Military – Civil War	Ships and Marines?	Stele of Thethy, describes attacks by Intef I against the Herakleopolis rulers and confirms the capture of the Thinite nome.	BAR § I.423A-G, private collection.
11	Egyptian Nile	Military – Civil War	Ships and Marines?	Depiction of King Mentuhotep I from Temple at Gebelein, smiting enemies. Conquering the Nine Bows and Egyptians. Unification.	BAR § I.423H, now in Cairo.
11	Egyptian Nile	Military – Civil War	Ships and Marines	The autobiography of Tjehemau, a Nubian mercenary who fought in Mentuhotep I's war of unification.	Brovarski & Murnane, 'Inscriptions', pp. 11-20.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
11	Nubian Nile	Military – Expedition	Ships	Inscription of Khety, under King Mentuhotep II conducts expedition to Wawat in Nubia.	BAR § I.424-26.
11	Red Sea – Punt	Diplomatic – Trade Protection	Ship	Henu, under King Mentuhotep III conducts expedition to Wadi Hammamat, including an army of 3000 clearing the way, before making a ship on the Red Sea coast for an expedition to Punt(?).	Lichtheim, Autobiographies, No. 21; BAR § I.427-433, esp. § I.429&432.
11	Egyptian Nile – Eastern Desert	Constabulary – State Building	Ship	Amenemhat, under King Mentuhotep IV conducts mining expedition to the Hammamat, with 10,000 men. An army of 3000 sailors then travels with the sarcophagus back to Egypt.	BAR § I.434-453: Lichtheim, AEL I.113-115.
11	Red Sea – Eastern Desert	Diplomatic – Trade Protection	Ship	Senekh, under Mentuhotep IV conducts expedition to through the Hammamat, as Commander of Troops and Commander of [-] on the river, clearing the highlands and the route to the Red Sea.	BAR § I.454-56.
11	Egyptian Nile	Diplomatic – Trade Protection	Ships	Eti under Mentuhotep IV builds 60 ships. 'He is innocent of violence to another'.	BAR § I.457-59.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Egyptian Nile	Military – Civil War	Ships (20)	Khnumhotep (Tomb No. 14 at Beni Hasan) describes his accompanying King Amenemhat I with 20 cedar ships during a campaign against a rival king(?)	BAR § I.463-65; Newberry, Beni Hasan I, esp. pl. 44.
12	Nubian Nile	Military – Expedition	Ships and Marines?	The vizier Intefiger records a campaign to Nubia under Amenemhat I.	Parkinson, Voices, pp. 95-96.
12	Nubian Nile	Military – Expedition	Ships?	Rock inscription at Korusko, describes a campaign against the Nubians. Amenemhat I.	BAR § I.472-3.
12	Nubian Nile	Military – Expedition	Ships?	Literary Text: 'The Teaching of Amenemhat (I)' lists a campaign against the Nubians. (possibly later).	BAR § I.474-83.
12	Red Sea – Sinai?	Military – Expedition	Ships	Khnumhotep's tomb at Beni Hasan describes a campaign against the Asiatics. Amenemhat I.	BAR § I.463-65.
12	Red Sea – Eastern Desert and Sinai	Military – Expeditions	Land forces? Supporting Ships?	Nessumontu's stele lists campaigns against 'Sand dwellers' and Asiatics (strongholds) under Amenemhat I.	BAR § I.469-71.
12	Red Sea – Eastern Desert and Sinai	Military – Expedition	Land forces? Supporting Ships?	Literary Text: 'The Teaching of Amenemhat (I)' lists a campaign against the 'sand dwellers'. (probably later).	BAR § I.474-83.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Egyptian Nile – Western Delta?	Military – Defence	Land forces? Supporting ships?	Literary Text: 'Sinuhe' lists a campaign against the Libyans, (he then flees to Palestine).	BAR § I.486-97.
12	Mediterranean Sea	Diplomatic – Trade Protection	Ship(s)	Literary Text: 'Sinuhe' in Palestine meets Senusret I's Egyptian ambassador and returns to Egypt. Implied power of Egyptians in Syria-Palestine.	Lichtheim, AEL I.222-235.
12	Red Sea	Diplomatic – Trade Protection	Ship(s)	Literary Text: 'The Tale of the Shipwrecked Sailor' describes mythical voyages in the Red Sea.	Lichtheim, AEL I.211-215.
12	Nubian Nile	Military – Expedition	Ships and Marines?	General Mentuhotep's inscription on a stele from Wadi Halfa recording King Senusret I's campaign in Upper Nubia.	BAR § I.510-514.
12	Nubian Nile	Military – Expedition	Ships and Marines	Amenemhat (Tomb No. 2 Beni Hasan) records a campaign of Senusret I in Upper Nubia.	Lichtheim, Autobiographies, No. 60; BAR § I.515-523.
12	Egyptian Nile and Eastern Desert	Constabulary – State Building	Ships and Marines	Amenemhat (Tomb No. 2 Beni Hasan) records two mining expeditions to Wadi Hammamat during the reign of Senusret I.	Lichtheim, Autobiographies, No. 60; BAR § I.515-523.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Nubian Nile	Military – Expedition(s)	Ships and Marines?	Rock inscription at Jebel el Girgawi, describes a series of campaigns against the Nubians. Senusret I.	Zaba, Rock Inscriptns of Lower Nubia, 1974; & Parkinson, Voices, 1991, No. 31.
12	Egyptian Nile	Constabulary – State Building	Ships	Stele of Mentuwosre from Abydos, boasts 'I am rich in ships, great in vintages.' Senusret I.	Lichtheim, Autobiographies, No. 44.
12	Red Sea – Punt	Diplomatic – Trading Expedition	Ships	Port at Wadi Gawasis on the Red Sea coast records an expedition to Punt under Senusret I.	Sayed, First Congress of Egyptology, 1976, pp. 106 ff.
12	Nubian Nile	Military – Expedition	Ships and Marines?	Sihathor's stele from Abydos records an expedition to Nubia. Islands off He? King Amenemhat II.	BAR § I.599-603.
12	Mediterranean Sea	Military – Expedition	Ships and Marines?	Amenemhat II's daybook includes the dispatch of troops to the Lebanese coast and for raid on Cyprus.	Redford, Egypt, Canaan and Israel, pp. 78-79.
12	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	Sihathor's stele from Abydos records an expedition to the Mine land (South Sinai?). Amenemhat II.	BAR § I.599-603.
12	Red Sea – Punt	Diplomatic – Trading Expedition	Ships and Marines	Khentkhetwer's stele from Wadi Gawasis records an expedition to Punt. Amenemhat II.	BAR § I.604-05.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Egyptian Nile	Diplomatic – Trade Protection	Ship	Khnumhotep II (Tomb No. 2 Beni Hasan) records a visit by 37 Asiatics. Non-Egyptian ship? Time of King Senusret II.	BAR § I.619-39, esp. § I.620; Newberry, Beni Hasan I, pl. 30.
12	Nubian Nile	Military – Expedition	Ships and Marines?	The campaigns of King Senusret III in Nubia. At Elephantine rebuilding a canal. Then building forts at Semna and Uronarti. (see Semna boundary stele below).	BAR § I.640-673.
12	Nubian Nile	Constabulary – Border Protection	Fortress at Semna. Ships and Marines?	Stele found at Semna establishing Senusret III's southern boundary in his Year 8. (Note still in use under Army Commander Renseneb during Dyn 13)	BAR § I.651-52; Berlin No. 14753. (BAR § I.751-52).
12	Nubian Nile	Constabulary – Border Protection	Fortress at Semna. Ships and Marines?	Stela found at Semna establishing Senusret III's southern boundary, Year 16.	BAR § I.653-660: Lichtheim AEL I.118-120. (Berlin No. 1157).
12	Nubian Nile	Military – Expedition	Ships and Marines?	Sobek-khu's stele from Abydos leads 60 men in an expedition to Nubia. Senusret III.	BAR § I.676-87; Garstang, El Arabah, pl. 4 & 5.
12	Mediterranean Sea	Military – Expedition	Land Forces with Ships and Marines?	Sobek-khu's stele from Abydos records an expedition to Retjenu (Syria) during which he leads the reserves to victory in battle. Senusret III.	BAR § I.676-87; Garstang, El Arabah, pl. 4 & 5.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Egyptian Nile	Constabulary – State Building	Ships and Marines?	Stele of Ikhernofret from Abydos, describes how he made the neshmet bark and the conduct of the Osiris mysteries (including sham combat!). Senusret III.	Lichtheim, Autobiographies, No. 42.
12	Egyptian Nile – Eastern Desert	Constabulary – State Building	Ships and Marines?	Hammamat inscription records a mining expedition to Wadi Hammamat during the reign of Amenemhat III. Men in the expedition include 30 sailors, specialists and an army (workforce) of 2000.	BAR § I.707-712.
12	Red Sea – Sinai	Constabulary – State Building	Ships and Marines	Inscriptions at Wadi Maghara and Serabit el Khadim record a mining expedition, under Khenemsu, during Year 2 of the reign of Amenemhat III. The inscription of Harnakht confirms they travelled by sea.	BAR § I.713-718.
12	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	Inscriptions at Wadi Maghara record mining expeditions, during Years 41, 42 and 43 of the reign of Amenemhat III.	BAR § I.719-723.
12	Nubian Nile	Military – Expedition(s)	Ships and Marines?	The Semna Despatches (from Ramesseum library). Reports relating to the administration of Semna fortress. Under the reign of King Amenemhat III.	Smither, JEA, 1945; & Parkinson, Voices, 1991, No. 30.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
12	Mediterranean Sea	Diplomatic – Trade Protection	Marines?	Archaeological evidence supporting Egyptian trade goods throughout Eastern Mediterranean during the reign of King Amenemhat III.	PM VII, p. 393.
12	Red Sea – Sinai	Constabulary – State Building	Ships and Marines?	Inscriptions at Wadi Maghara and Serabit el Khadim record mining expeditions, during the reign of King Amenemhat III & IV.	BAR § I.724-738, & § I.750.
13	Egyptian Nile	Constabulary – State Building	Ships and Marines	Abydos Stele of King Neferhotep I, includes a royal visit to Abydos, with troops and marines sent before the sacred barge (for advanced protection?).	BAR § I.753-765, esp. § I.760.
13	Egyptian Nile	Constabulary – State Building	Ships and Marines	Stele of Horemkhauf from Hierakonpolis, describes his visit to Memphis on a boat carrying the statues of Horus of Nekhen and his mother Isis.	Hayes JEA 1947: Lichtheim AEL I.129-130.
13	Nubian Nile	Military – Expedition	Ships and Marines?	A campaign to supress the rebellious Medjay of Lower Nubia, under King Sobekhotep IV.	Säve-Sönderberg, Aegypten und Nubien, 1941, p. 120.
Second Intermediate Period (1650-1550 BCE)					
15	Egyptian Nile	Constabulary – State Building	Ships and Traders/ Invaders?	The city of Avaris (Tell el Dab'a) and the rise of the Hyksos rulers of Egypt. Archaeological evidence.	Shaw, Ancient Egypt, 2000, pp. 186-195.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
15	Egyptian Nile	Constabulary – State Building	Ships and Traders/ Invaders?	The city of Memphis is captured by the Hyksos.	Shaw, Ancient Egypt, 2000, pp. 195-199.
17	Egyptian Nile	Military – Civil War	Ships and Marines?	Koptos Decree of King Intef VII describes penalties against those who have assisted alternative Kings, during a period of civil war.	BAR § I.773-780; Petrie, Koptos, pl. 8.
17	Egyptian Nile	Military – Civil War	Ships and Marines?	The Theban King Taa-Seqenenra attacks his rivals in Upper Egypt. Theban attacks continue under his son King Kamose.	Based upon evidence of battle on his mummified remains, Cairo Museum.
17	Egyptian Nile	Military – Civil War	Ships and Marines	The Kamose Stele, describing the Theban King Kamose's attacks the Hyksos Kings in the North.	Habachi, Kamose, 1972, p. 48: Shaw, Ancient Egypt, 2000, pp. 210-215.
New Kingdom (1550-1069 BCE)					
18	Egyptian Nile	Military – Civil War	Ships and Marines	Biography of Ahmose (son of Ebana), from el Kab. Under the reign of King Ahmose.	BAR § II.6-16: Lichtheim, AEL II.12-13.
18	Nubian Nile	Military – Expedition	Ships and Marines	Biography of Ahmose (son of Ebana), from el Kab. Under the reign of King Ahmose.	BAR § II.14: Lichtheim, AEL II.13.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
18	Nubian Nile	Military – Expedition	Ships and Marines	Biography of Ahmose (son of Ebana), from el Kab. Attack against Kush. Under the reign of King Amenhotep I.	BAR § II.39: Lichtheim, AEL II.13-14.
18	Nubian Nile	Military – Expedition	Ships and Marines?	Tombos Stele, Nubian campaign during reign of King Thutmose I.	BAR § II.71-73.
18	Nubian Nile	Military – Expedition	Ships and Marines?	First Cataract inscriptions recording Nubian campaign under Thutmose I.	BAR § II.75-77.
18	Nubian Nile	Military – Expedition	Ships and Marines	Biography of Ahmose (son of Ebana), from el Kab. Attack against Kush. Under the reign of Thutmose I.	BAR § II.80. See also § II.84. Lichtheim, AEL II.14.
18	Mediterranean Sea	Military – Expedition	Army (Ships?)	Biography of Ahmose (son of Ebana). Attack against Naharin – overland or by sea? Under Thutmose I.	BAR § II.81. See also § II.85. Lichtheim, AEL II.14.
18	Nubian Nile	Military – Expedition	Ships and Marines?	Aswan inscription, Nubian campaign during reign of King Thutmose II.	BAR § II.121-122.
18	Mediterranean Sea	Military – Expedition	Army (Ships?)	Biography of Ahmose-Pen-Nekhbet. Attack against Upper Retjenu and Niy – overland or by sea? Under Thutmose II.	BAR § II.124-125.
18	Red Sea - Punt	Diplomatic – Trading Expedition	Ships and Marines	Punt Reliefs – Deir el Bahri. Expedition to Punt under Queen Hatshepsut.	BAR § II.248-266 & 287-288.
18	Egyptian Nile	Constabulary – State Building	Ships and Marines with Recruits	Transportation of obelisks - reliefs at Deir el Bahri. Under Hatshepsut.	BAR § II.323-332.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
18	Nubian Nile	Military – Expedition	Ships and Marines?	Sehel Inscription of Ty, Nubian campaign during reign of Hatshepsut.	Habachi, JNES 16, 1957, p. 99.
18	Mediterranean Sea	Military – Expedition	Army (Ships?)	Annals of King Thutmose III, Years 22 to 30. Campaign against the Retjenu – overland or by sea?	BAR § II.407-467: Lichtheim, AEL II.29-35.
18	Mediterranean Sea	Military – Expedition	Army with Fleet Support	Annals of King Thutmose III, Years 31 to 42. Campaign against the Naharin – overland or by sea?	BAR § II.468-540.
18	Mediterranean Sea	Military – Expedition	Army (Ships?)	Biography of Amenenhab. Campaign against the Retjenu, under reign of Thutmose III.	BAR § II.579-592.
18	Nubian Nile	Constabulary – State Building	Ships	Canal inscription at Sehel Island. Thutmose III clears First Cataract.	BAR § II.650.
18	Mediterranean Sea	Military – Expedition	Army (Ships?)	Hymn of Victory. Thutmose III boasts of his victories – including Crete.	Lichtheim, AEL II.35-39 & BAR § II.656-662:
18	Red Sea - Punt	Diplomatic – Trading Expedition	Ships	Tomb of Rekhmire trade from Punt under Thutmose III.	BAR § II.750.
18	Mediterranean Sea	Military – Expedition	Army with Fleet Support	Karnak Stele describing the campaigns against the Naharin – overland or by sea? Reign of King Amenhotep II.	BAR § II.782-790.
18	Mediterranean Sea	Military – Expedition	Army with Fleet Support	Inscription of the bodyguard Amenhotep – campaigns against the Naharin. Reign of King Thutmose IV.	BAR § II.818.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
18	Nubian Nile	Military – Expedition	Ships and Marines	Konosso Inscription (near Philae). Nubian expedition under Thutmose IV.	BAR § II.825-829.
18	Nubian Nile	Military – Expedition	Ships and Marines	Konosso inscription (near Philae). Nubian expedition under King Amenhotep III.	BAR § II.845.
18	Nubian Nile	Military – Expedition	Ships and Marines	Bubastis inscription describing Nubian expedition under Amenhotep III.	BAR § II.849-850.
18	Nubian Nile	Military – Expedition	Ships and Marines	Semna inscription describing Nubian expedition under Amenhotep III.	BAR § II.852-854.
18	Red Sea – Sinai	Constabulary – State Building	Ships and Troops	Sinai Inscription (Serabit el Khadim) of mining expedition with reference to crossing the sea. Reign of Amenhotep III.	BAR § II.877.
18	Red Sea – Punt	Diplomatic – Trading Expedition	Ships and Marines	Punt expedition suggested by stele from Amenhotep III's mortuary temple at Thebes.	
18	Egyptian Nile	Constabulary – Border Protection	Ships and Marines	Karnak statue of noble Amenhotep, describing frontier protection and marines. Reign of Amenhotep III.	BAR § II.916.
18	Mediterranean Sea	Diplomatic – Intelligence and Trading Expeditions	Ships?	Amarna Letters detail diplomacy under King Akhenaten. Trade with Byblos and diplomatic intrigue. Fails to send Egyptian force by sea before Hittite force arrives.	Moran, Amarna Letters, 1992.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
18	Nubian Nile	Military – Expedition	Ships and Marines	Nubian expedition to crush a rebellion under King Akhenaten. Syrians used as garrison troops.	Helck, SÄK, 1980.
18	Nubian Nile	Diplomatic – Trading Expedition	Ships and Sailors	Tomb of Huy, Thebes. Scenes of tribute arriving from Kush, with richly decorated boats. Reign of King Tutankhamun.	BAR § II.1038-1040.
18	Egyptian Nile	Diplomatic – Trading Expedition	Ships and Sailors	Tomb of Kenamun, Thebes. Scenes of Syrian ambassadors arriving at port.	Davies, Private Tombs, 1963, pl. XV..
19	Red Sea – Punt	Diplomatic – Trading Expedition	Ships	Karnak reliefs showing chiefs of Punt trading with King Horemheb.	BAR § III.38-39.
19	Nubian Nile	Military – Expedition	Ships	Karnak reliefs revealing expedition to Kush under Horemheb.	BAR § III.42-44.
19	Mediterranean Sea	Military – Expedition	Army and Ships?	Syrian campaign under King Rameses I, described by his son King Sety I.	Kitchen, Pharaoh Triumphant, 1982, p. 19.
19	Mediterranean Sea	Military – Expedition	Army and Ships?	Karnak reliefs of Lebanon campaign under King Sety I.	BAR § III.94 & 114.
19	Egyptian Nile - Western Delta	Military – Expedition	Army and Ships?	Karnak reliefs of Libyan invaders defeated by Sety I.	BAR § III.120-139.
19	Mediterranean Sea	Military – Expedition	Army and Ships?	Karnak reliefs of Hittite campaign under Sety I.	BAR § III.140-148.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
19	Nubian Nile	Military – Expedition	Army and Ships?	Nubian campaign during Year 8 of Sety I.	Kitchen, Ramesside Inscriptions I, 1993, pp. 81-88.
19	Egyptian Nile	Constabulary – State Building	Ships and Troops	Aswan inscription describing obtaining obelisks under Sety I.	BAR § III.202.
19	Egyptian Nile	Constabulary – State Building	Ships and Troops	Silsileh inscription describing a mining expedition, including rations, under Sety I.	BAR § III.206-208.
19	Red Sea – Punt	Diplomatic – Trading Expedition	Ships	An expedition to Punt under Sety I is mentioned in his temple at Karnak.	Kitchen, Ramesside Inscriptions I, 1993, pp. 21-22.
19	Egyptian Nile	Constabulary – State Building	Ship	King Rameses II's Great Abydos inscription detailing gifts to his father including a cargo ship laden with the great things of God's Land.	BAR § III.274.
19	Mediterranean Sea	Military – Expedition	Army and Ships?	Reliefs of the numerous campaigns of King Rameses II against the Hittites. Including the Battle of Kadesh. Various sites including Karnak.	BAR § III.297 & 298-304, Kadesh in BAR § III.305-365: Lichtheim, AEL I.57-72.
19	Mediterranean Sea	Diplomatic – Trading Expedition	Ships	Bentresh Stele (found in Karnak) including a statue of Khonsu going to Bentresh in a great ship with five transports.	BAR § III.433-447, esp. 441.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
19	Nubian Nile	Military – Expedition	Ships and troops?	The Nubian wars of Rameses II. Various sites including Abu Simbel.	BAR § III.449-486.
19	Egyptian Nile – Western Delta?	Military – Defence	Army and Ships	A battle with Sherden and Libyans during a Libyan war under Rameses II. Inscriptions on the Tanis Stelae and the Aswan Stele (warriors of the sea).	BAR § III.491 & 479-480.
19	Red Sea – Punt	Diplomatic – Trading Expedition	Ships	An expedition to Punt under Rameses II is mentioned in his temple at Abydos.	Kitchen, Ramesside Inscriptions II, 1996, pp. 139-144.
19	Egyptian Nile – Western Delta?	Military – Defence	Army and Ships (every man of war, III.579)	A Libyan and Sea People's invasion of the Delta under King Merenptah. Invasion along the Nile branches toward Memphis. Various sites incl. Karnak.	BAR § III.574-592, 594-595, 598-601, & 607-617: Lichtheim, AEL II.73-78.
20	Egyptian Nile	Constabulary – State Building	Ships and Troops	Silsileh inscription describing a mining expedition of 40 transports and four ships, under King Rameses III.	BAR § IV.19.
20	Egyptian Nile – Western Delta?	Military – Defence	Army and Ships	The first Libyan and Sea People's invasion of Year 5 of Rameses III. Invasion of the Nile Delta? Various sites incl. Medinet Habu.	BAR § IV.37-58, IV.405, esp. IV.44.
20	Egyptian Nile – Western Delta?	Military – Naval Battle	Army and Ships	The Sea People's invasion of Year 8 of Rameses III. Invasion at the entrance to the Nile Delta?. Various sites incl. Medinet Habu. Five ships in Naval Battle.	BAR § IV.62-82, IV.403, esp. 65-66, & 74 (battle).

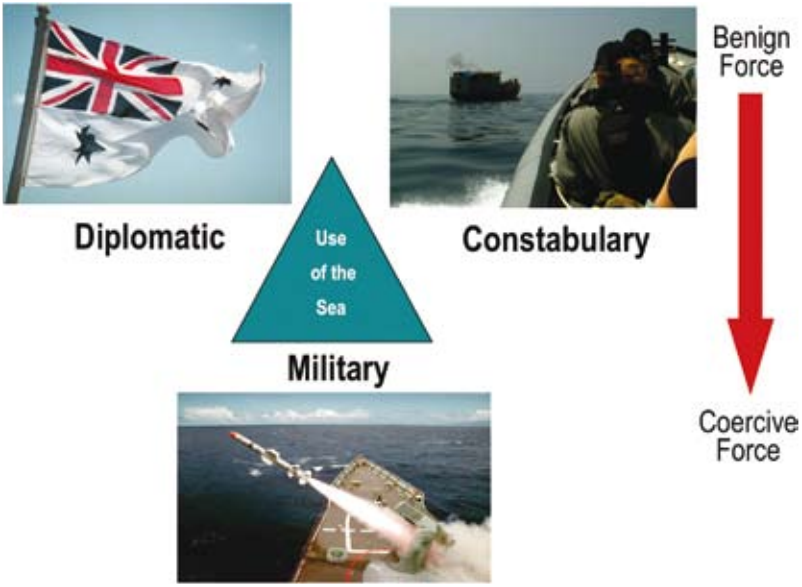
Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
20	Egyptian Nile – Western Delta?	Military – Defence	Army and Ships?	Second and subsequent Libyan invasions under Rameses III. Invasion of the Nile Delta?.Various sites incl. Medinet Habu.	BAR § IV.86-114.
20	Mediterranean Sea	Military – Expedition	Army and Ships?	Campaign in Syria under Rameses III, against the Hittites. Various sites incl. Medinet Habu.	BAR § IV.117-131, IV.404.
20	Nubian Nile	Military – Expedition	Army and Ships	Nubian expedition of Rameses III. Depicted at Medinet Habu.	BAR § IV.136-138.
20	Egyptian Nile	Constabulary – Border Protection	Temple of Khnum at Elephantine. Ships and Marines?	Inscribed blocks from Elephantine. 'their ships be not stopped by any patrol'.	BAR § IV.147
20	Red Sea – Punt	Diplomatic – Trading Expedition	Ships	Papyrus Harris describes an expedition to Punt under Rameses III. Also mentioned in Medinet Habu temple.	BAR § IV.407.
20	Red Sea – Sinai	Constabulary – State Building	Ships and Troops	Papyrus Harris describes an mining expeditions to Sinai under Rameses III.	BAR § IV.408-409.
20	Egyptian Nile – Eastern Desert	Constabulary – State Building	Troops (with ships at Coptos)	A mining expedition to the Wadi Hammamat under King Rameses IV. Total of 8368 people with supplies.	BAR § IV.464-467.
20	Mediterranean Sea	Diplomatic – Trading Expedition	Ships and Marines	Wenamon visits Dor, Tyre, Byblos and Cyprus. In the tale he is robbed by pirates, treated poorly due to the lost prestige of the Egyptian King and blown off course. Papyrus Moscow. Reign of King Rameses XI.	BAR § IV.563-591, esp. IV.565-569, & 572: Lichtheim, AEL II.224-230.

Dynasty	Region	Role and Task	Maritime Forces	Evidence	Sources
20	Mediterranean Sea	Constabulary – Anti-piracy	Ships and Marines	Trading expedition by Wenamon under Rameses XI. Wenamon visits Dor, Tyre, Byblos and Cyprus. In the tale he is robbed by pirates, treated poorly due to the lost prestige of the Egyptian King and blown off course. Papyrus Moscow.	BAR § IV.563-591, esp. IV.565-569, & 572: Lichtheim, AEL II.224-230.
20	Nubian Nile	Constabulary – State Building	Ship	Turin Papyrus. Letter to the King's Son of Kush, Payneshsi, ordering a portable shrine to be completed and shipped to Tanis?	BAR § IV.596-600, esp. IV.599.

APPENDIX 2 – DEFINING MARITIME OPERATIONS

Naval practitioners tend to describe the overarching roles of maritime forces within their maritime doctrine.[263] The trinity of roles for maritime forces may be characterised as military, diplomatic or constabulary. Specific maritime operations may in practice include combinations of one or more of these roles depending upon circumstances, although the individual tasks that underlie a maritime operation would typically be either military, diplomatic or constabulary in nature.

Diplomatic operations range from the benign to the coercive and include tasks such as search and rescue, assistance to refugees, hydrographic surveying, vessel traffic services, disaster relief, assistance to foreign forces, evacuations, naval presence and coercive operations. As originally conceived, the diplomatic role included tasks involving prestige, manipulation and negotiation from strength (sometimes called gunboat diplomacy). Diplomatic tasks recorded for Ancient Egyptian maritime forces mostly involved trade protection, although many expeditions would also have included aspects of prestige, including naval presence and coercive operations (short of actual conflict).



The trinity of roles for Maritime Forces

Constabulary operations range from the maintenance to the enforcement of good order at sea and include tasks such as environmental management and protection, fishery management and protection, oil and gas field protection, peace building, enforcement of maritime agreements, quarantine operations, prevention of immigration, peacekeeping, aid to the civil power, drug interdiction, anti-piracy operations, maritime counter-terrorism, support to counterinsurgency operations, peace enforcement and conflict prevention, enforcement of sanctions and embargoes. The constabulary role includes both nation-building and traditional coastguard responsibilities, but has been expanded in the last decades to include maritime barrier operations, peace operations, maritime security operations and blockades (other than when at war). Constabulary tasks recorded for Ancient Egyptian maritime forces involved state building, counterinsurgency operations, peacekeeping, anti-piracy operations and border protection.

Military operations include the traditional purposes of maritime forces. It represents activities when ship's crews have to go into 'harm's way' to 'fight and win at sea'.[264] Modern navies have the legal power to apply force at sea in accordance with international law. In times of war, the military tasks of maritime forces are normally grouped into combat operations:

a. at sea, and

b. from the sea.

Combat operations at sea, in effect the application of the philosophical concept of sea control, always imply the actual or threatened use of force against enemy forces or to protect maritime communications. For modern navies, sea control includes military tasks such as intelligence collection and surveillance, maritime cover against shipping, maritime strike and interdiction, containment, layered defence, advance force operations and maritime trade protection. Combat operations from the sea, in effect the application of the philosophical concept of maritime power projection, imply the actual or threatened use of force but, in this instance, in order to influence events ashore. For modern navies, maritime power projection includes military tasks such as land strike, support to operations on land, amphibious operations and maritime mobility (sealift).

The span of maritime tasks as used by the Australian Navy

Modern Egypt and the Middle East

ENDNOTES

1 Herodotus, *The Histories*, translated by Robin Waterfield, Oxford University Press, Oxford, 1998, p. 131.

2 Ian Shaw, (ed.), *The Oxford History of Ancient Egypt*, Oxford University Press, Oxford, 2000, is one of the best introductions to Ancient Egypt. The chronology and spelling used in this study is consistent with Shaw's book.

3 The term 'maritime' is used in its broadest context and in this book includes riverine, coastal and seagoing activities. Sea power applies equally to the application of maritime force in rivers, lakes, coastal waters and seas.

4 There are five main cataracts on the Nile between Aswan and Khartoum, each consisting of shallow unnavigable stretches where the water's surface is broken by numerous small boulders and stones lying on the river bed, as well as many small rocky islets.

5 For clarification refer to the modern political map of the region at the end of this book, p. 138.

6 The location of the region that the Ancient Egyptians called Punt is unknown. It was most likely located south of Port Sudan on the Red Sea coastline of Africa. Possible alternatives include modern Somalia or the Yemen. Shaw, *The Oxford History of Ancient Egypt*, pp. 322-324.

7 Some of the peasants would have worked in the maritime environment, as sailors or perhaps marines, while higher ranking officials often included maritime leadership under a more general official title such as under the duties of a vizier.

8 From Shaw, *The Oxford History of Ancient Egypt*, pp. 479-481.

9 Sea power can be defined as the capacity to influence people's behaviour by the way the sea is used. It is multifarious and incorporates matters of trade, naval strategy, economic exploitation of the sea, exploration, human recreation and environmental preservation. See: Geoffrey Till, (ed.), *Seapower at the Millennium*, Sutton Publishing, Stroud, Gloucestershire, 2001, p. 1.

10 Although it is true that the Ancient Egyptians influenced the development of Greek and Roman sea power, Egyptians are not normally associated with the rise of Western sea power.

11 For example a boat, dating to the Old Kingdom, has survived and is now on display near Khufu's pyramid at Giza. See: Nancy Jenkins, *The Boat Beneath the Pyramid*, Thames and Hudson, London, 1980.

12 For instance David Fabre, *Seafaring in Ancient Egypt*, Periplus, London, 2005, p. 11.

13 Further discussion of sources in Ancient Egypt may be found in Shaw, *The Oxford History of Ancient Egypt*, pp. 14-16.

14 Deep water fish bones were uncovered during excavations at several epipaleolithic communities in Egypt and Nubia, see Wilma Wetterstrom, 'Foraging and Farming in Egypt', in T. Shaw, et al (eds), *The Archaeology of Africa: Food, Metals and Towns*, London, 1993, pp. 184-185.

15 The sewn plank construction became the norm for all boat construction in Ancient Egypt. The construction of wooden keel boats appears to have developed independently under the Greeks or perhaps the Phoenicians in the Eastern Mediterranean.

16 An example of egalitarian ownership of war-canoes comes from the Marquesas Islands in the Pacific; where the respectable families of the society each owned a part of the war-canoe as well as their own paddle, the parts being divided throughout the valley among some 20 families. The war-canoe was assembled when required for the purposes of war or ceremony, such as visiting a neighbouring tribe. See: Alfred C. Haddon and James Hornel, *Canoes of Oceania*, Bishop Museum Press, Honolulu, 1936 (reprinted 1975), p. 40.

17 The prehistoric sources are detailed in Gregory P. Gilbert, *Prehistoric Expeditions on the Nile: Boat Depictions on Prehistoric Egyptian Pottery*, MA Thesis, Macquarie University, Sydney, 1998.

18 The term 'war-canoe' is used in preference to 'long boat' even though those scholars who prefer a peaceful interpretation of prehistoric Egypt rightly suggest that there is no smoking gun linking such canoes to acts of war. Their use as war-canoes is supported by the iconography of power associated with their depictions and is supported by anthropological parallels. See for example, C.W. Bishop, 'Long Houses and Dragon Boats', *Antiquity*, vol. 12, 1938, pp. 411-424.

19 Björn Landström, *Ships of the Pharaohs: 4000 Years of Egyptian Shipbuilding*, Doubleday, New York, 1970, pp. 17-19.

20 From Gilbert, *Prehistoric Expeditions on the Nile*, pp. 60-61; and compare with the Thai Royal Barge which was 40m long with approximately 80 oarsmen in Bishop, 'Long-Houses and Dragon-Boats', especially Figure 8.

21 Colin Renfrew and Paul Bahn, *Archaeology: Theories, Methods and Practice*, 3rd edn, Thames and Hudson, London, 2000, pp. 174-177.

22 This is discussed in Bruce G. Trigger, *Understanding Early Civilizations: A Comparative Study*, Cambridge University Press, Cambridge, 2003, pp. 40-48.

23 See: the summary in Renfrew and Bahn, *Archaeology: Theories, Methods and Practice*, p. 167.

24 Renfrew and Bahn, *Archaeology: Theories, Methods and Practice*, p. 167.

25 The process of state formation in Egypt is described in Shaw, *The Oxford History of Ancient Egypt*, pp. 17-88; in addition see Gregory P. Gilbert, *Weapons, Warriors and Warfare in Early Egypt*, BAR International Series 1208, Archaeopress, Oxford, 2004, for the role of warfare in the formation of Ancient Egypt.

26 This early form of sea power would have seen communities with war-canoes exercising control over communications, trade and military activities along parts of the Nile river.

27 Nicholas A.M. Roger, *The Safeguard of the Sea, A Naval History of Britain, Volume One 660-1649*, Harper Collins, London, 1997, pp. 168-169 and 204.

28 For instance see Barbara Adams and Krzysztof M. Cialowicz, *Protodynastic Egypt*, Shire Publications, Princes Risborough, Buckinghamshire, 1997, pp. 36-48.

29 Gilbert, *Prehistoric Expeditions on the Nile*, pp. 69-70.

30 The term 'maritime forces' is used in preference to 'navies' when discussing Ancient Egypt. This is to avoid the typically modern separation between military and naval forces that is implied by the terminology of armies and navies, but is not evident in the ancient sources.

31 Gilbert, *Weapons, Warriors and Warfare in Early Egypt*, pp. 31-32.

32 The Gebel el Arak prehistoric flint knife with carved hippopotamus ivory handle is now found in the Louvre's Egyptian Collection in Paris, Louvre E11517.

33 The Narmer Palette may be seen in the Egyptian Museum, Cairo, Egypt, JE 30028 (CG 14716).

34 Although a direct historical interpretation of the Narmer Palette is somewhat problematic, the view that the Narmer Palette was an ideological construct having little to do with historical events in E. Christiana Köhler, 'History or Ideology?: New Reflections on the Narmer Palette and the Nature of Foreign Relations in Predynastic Egypt', in: E.T. Levy and E.C.M. van den Brink (eds), *Egypt and the Levant*, Leicester University Press, London, 2002, pp. 499-513, is not indicative of peaceful state formation. The over-riding symbolism of the military power exercised by the Egyptian king must remain fundamental to any interpretation of the Narmer Palette and the state formation process.

35 Peter Padfield, *Maritime Supremacy and the Opening of the Western Mind*, John Murray, London, 1999, pp. 2-3.

36 The most important works are Alfred T. Mahan, *The Influence of Sea Power upon History 1660-1783*, Little, Brown and Company, Boston, 1890; and Julian S. Corbett, *Some Principles of Maritime Strategy*, Longmans, Green and Co., London, 1911.

37 Victor D. Hanson, *Why the West has Won*, Faber and Faber, 2001, quote from a comparison of American and Japanese approaches to the Battle of Midway 1942, p. 387.

38 For a critic of Hanson's views see John A. Lynn, *Battle: A History of Combat and Culture*, Westview Press, Cambridge, MA., 2003, pp. 12-25.

39 See: Padfield, *Maritime Supremacy and the Opening of the Western Mind*, p. 3.

40 Although this book concentrates on Ancient Egypt as an example of a non-Western society, it is hoped that future research will examine the influence of sea power in the development of other non-Western civilisations. A good start is the work by V. Tin-bor Hui, *War and State*

Formation in Ancient China and Early Modern Europe, Cambridge University Press, Cambridge, 2005.

41 For example see P. de Souza, *Seafaring and Civilization: Maritime Perspectives on World History*, Profile Books, London, 2002, especially pp. 115-124.

42 Edward W. Lane, *An Account of the Manners and Customs of the Modern Egyptians, Written in Egypt During the Years 1833-1835*, East-West Publications, The Hague and London, 1978 (first published 1836).

43 Steve Vinson, *The Nile Boatman at Work*, Münchner Ägyptologische Studien 48, Philipp von Zabern, Mainz, 1998.

44 Miriam Lichtheim, *Ancient Egyptian Literature, vol. I: The Old and Middle Kingdoms*, University of California Press, Berkeley, 1973, p. 170.

45 Alan H. Gardiner, *Hieratic Papyri in the British Museum*, 3rd ser., British Museum, London, 1935, vol. I, p. 47, and vol. II, pl. 25.

46 For the superstitions and ceremonies of Egyptian mariners see the initial thoughts in Fabre, *Seafaring in Ancient Egypt*, pp. 191-196.

47 Torgny Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, Uppsala Universitets Arsskrift No. 6, Uppsala, 1946, pp. 75-77.

48 Fabre, *Seafaring in Ancient Egypt*, pp. 143-152.

49 For military titles see: Alan R. Schulman, *Military Rank, Title and Organisation in the Egyptian New Kingdom*, B. Hessling, Berlin, 1964; Andrea M. Gnirs, *Militär und Gesellschaft. Ein Beitag zur Sozialgeschichte des Neuen Reiches*, Heidelberger Orientverlag, Heidelberg, 1996; and Raymond O. Faulkner, 'Egyptian Military Organisation', *Journal of Egyptian Archaeology*, vol. 39, 1953, pp. 32-47.

50 All translations of Egyptian nautical titles involve some judgment. In an attempt to minimise confusion, the titles listed in this chapter are essentially those used by other scholars including: Dilwyn Jones, *A Glossary of Ancient Egyptian Nautical Titles and Terms*, Kegan Paul, London, 1988, pp. 49-110; and Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, pp. 71-94.

51 Jones, *A Glossary of Ancient Egyptian Nautical Titles and Terms*, pp. 111-124.

52 Based upon Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, pp. 71-94.

53 Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, p. 82.

54 James H. Breasted, *Ancient Records of Egypt*, 5 vols, University of Chicago Press, Chicago, 1906, (BAR) § II.710. Note that each clause in Breasted is designated with the prefix §.

55 Cheryl A. Ward, *Sacred and Secular: Ancient Egyptian Ships and Boats*, Archaeological Institute of America Monographs No. 5, University of Pennsylvania Museum, Philadelphia, 2000.

56 Based on Dilwyn Jones, *Egyptian Bookshelf: Boats*, British Museum Press, London, 1995, pp. 12-25; and Jenkins, *The Boat Beneath the Pyramid*, pp. 139-154.

57 Funerary boats were mostly papyrus boats or the later wooden papyriform funerary boats, see pp. 7-8.

58 Raymond O. Faulkner, *The Ancient Egyptian Pyramid Texts*, Clarendon Press, Oxford, 1969, Utterance 515.

59 Lichtheim, AEL I, p. 43.

60 BAR § II.888.

61 Translated by author from the biography of Sabni in Labib Habachi, *Sixteen Studies on Lower Nubia*, Institut Francais d'Archéologie Orientale, Cairo, 1981.

62 Lichtheim, AEL I, p. 17.

63 Lichtheim, AEL I, pp. 141-142.

64 Lichtheim, AEL I, p. 43.

65 Lichtheim, AEL I, p. 216, alternative in Richard B. Parkinson, *The Tale of Sinuhe and Other Ancient Egyptian Poems 1940-1640 BC*, Oxford University Press, Oxford, 1997, pp. 109-110.

66 Landström, *Ships of the Pharaohs*; Jones, *Egyptian Bookshelf: Boats*; Fabre, *Seafaring in Ancient Egypt*, pp. 89-129; Steve Vinson, *Egyptian Boats and Ships*, Shire Publications, Princes Risborough, Buckinghamshire, 1994; and also see Shelly Wachsmann, *Seagoing Ships and Seamanship in the Bronze Age Levant*, Chatham Publishing, London, 1998, pp. 9-38.

67 Byblos is located approximately 32km north of modern Beruit on the Lebanese coast.

68 From the Palermo Stone, see BAR § I.146-147.

69 Landström, *Ships of the Pharaohs*, pp. 35-55, 60-62.

70 Although sailing conditions would have varied depending upon seasons, winds, currents and local environments in coastal waters, the evidence shows that Ancient Egyptian sailing ships did travel long distances in the Mediterranean and Red seas as well as along the Egyptian and Nubian Nile. See for example: John H. Pryor, 'The Geographical Conditions of Galley Navigation in the Mediterranean', in R. Gardiner and J. Morrison, *The Age of the Galley, Mediterranean Oared Vessels Since Pre-Classical Times*, Conway, London, 1995, pp. 206-216.

71 The use of numerous nautical items including boats, oars, sails and knots as hieroglyphs within the Ancient Egyptian language confirms the central place that such everyday items had in their society. See: Alan H. Gardiner, *Egyptian Grammar*, 3rd edn, Griffith Institute, Oxford, 1957, pp. 498-499.

72 These figures assume two banks of oarsmen, although Egyptian artistic conventions only depict a single bank: that is the number of observed oarsmen is doubled.

73 In modern terminology the crew would be multiskilled, being oarsmen, sailors or marines as the situation demanded. It follows that the Egyptian terms for such crewmen, *seqedu* and *nefeu*, should not be simply translated as 'sailor' without caution.

74 Despite these difficulties, square rigged sails were also used on seagoing ships.

75 Cheryl W. Haldane and Diana C. Patch, *The Pharaoh's Boat at the Carnegie*, The Carnegie Museum of Natural History, Pittsburg, 1990.

76 Landström, *Ships of the Pharaohs*, p. 107. There is also a possibility that the plank keel was introduced in Egypt under Syrian or East Mediterranean influence, however, this cannot be confirmed. Note also that sewn ships constructed around a plank keel would have been much weaker than equivalent vessels built upon a keeled frame.

77 It is interesting to observe that the rapid developments in ship technologies during the Egyptian Predynastic period were reflected by dramatic changes in Egyptian societies, while the gradual improvements of Pharaonic times were not associated with major social restructuring. Although it is probable that many of the technological advances were generated during the Egyptian intermediate periods – times that were characterised by political disorder and social breakdown.

78 Some depictions have eight or even ten helmsmen each operating a large steering oar. Note that the Egyptian term for helmsman is *hemu* or *iry-hemyt*.

79 King Khufu, who ruled Egypt during the 4th Dynasty (from 2589-2566 BCE), was buried in the Great Pyramid at Giza. The boat was discovered buried in a boat pit adjacent to his pyramid in 1954. See: Jenkins, *The Boat Beneath the Pyramid*, and Landström, *Ships of the Pharaohs*, pp. 26-34.

80 The Dashur boats are now in the Egyptian Museum, Cairo; the Field Museum of Natural History at the University of Chicago, USA; and the Carnegie Museum Pittsburgh, USA. See: Haldane and Patch, *The Pharaoh's Boat at the Carnegie*.

81 Herbert E. Winlock, *Models of Daily Life in Ancient Egypt*, Harvard University Press, Cambridge, Massachusetts, 1955.

82 See: Barry J. Kemp, *Ancient Egypt, Anatomy of a Civilization*, 2nd edn, Routledge, London, 2006, pp. 308-311; and Wolfram Grajetzki, *The Middle Kingdom of Ancient Egypt*, Duckworth, London, 2006, pp. 151-161.

83 Kemp, *Ancient Egypt, Anatomy of a Civilization*, pp. 163, 302-308.

84 Although many obelisks were erected in Ancient Egypt, those built for Queen Hatshepsut (1473-1458 BCE) are depicted being transported upon their obelisk barges at the temple of Deir el Bahri on the west bank at Luxor.

85 Adams and Cialowicz, *Protodynastic Egypt*, pp. 49-56; and David Wengrow, *The Archaeology of Early Egypt*, Cambridge University Press, Cambridge, 2006, pp. 135-150. Overland transportation of goods was essentially limited to items that could be carried long distances

on the back of a donkey. Overland transportation of large items, such as the Lebanese timbers, was impractical.

86 King Sahura (2487-2475 BCE) was the second king of the 5th Dynasty.

87 Landström, *Ships of the Pharaohs*, pp. 63-69.

88 The depiction of large numbers of Syrians in the crews of Sahura's and later seagoing ships has led some scholars to suggest that all such vessels were crewed by Syrians. See: Manfred Bietak, 'Zur Marine des Alten Reiches', in J. Baines, T.G.H. James, A. Leahy and A.F. Shore, *Pyramid Studies and other Essays Presented to IES Edwards*, Egypt Exploration Society, London, 1988, pp. 35-40. The author would rather suggest that the Ancient Egyptian seagoing ships were manned by a combination of Egyptians and foreigners, and as with many traditional sailors, these crews would have been outsiders within their communities of birth. Much more research needs to be undertaken on the social aspects of seagoing sailors in ancient times before the idea that all such crews were non-Egyptian can be dismissed.

89 Modern naval architects design hulls to ensure that they have the strength to meet the bending moments caused by the ship's own weight or when the ship encounters rough seas. The longitudinal movement of a ship's hull that results from the bending of the bow and stern relative to midships, is known as 'hogging'.

90 See the description of the hogging-truss in Jones, *Egyptian Bookshelf: Boats*, pp. 40-42.

91 The evidence suggests that seagoing ships were constructed along the Nile Valley and then disassembled for transportation overland through the Eastern Desert from Koptos to the Red Sea coast where they were subsequently reassembled. A recent discovery of a boat at Wadi Gawasis near the Red Sea coast may provide more information regarding this overland connection between the Nile Valley and the Red Sea. See: D. Vergano, 'In the Egyptian desert, a surprising nautical find', *USA Today*, 5 March 2006, <www.usatoday.com/tech/science/columnist/vergano/2006-03-05-egyptian-ship_x.htm> (15 May 2006); and N. Hammond, 'Red Sea timbers provide a raft of knowledge', *The Times*, 6 March 2006, <www.timesonline.co.uk/article/0,,61-2071279,00.html> (15 May 2006).

92 Landström, *Ships of the Pharaohs*, pp. 122-127; and Jones, *Egyptian Bookshelf: Boats*, pp. 53-56.

93 Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*, p. 16.

94 Rameses III (1184-1153 BCE) is shown defeating the Sea People in a scene that has been called 'the first sea battle in history'. H.H. Nelson, et al, *Earlier Historical Records of Ramses III, Medinat Habu, vol. 1, The Epigraphic Survey, Oriental Institute,* University of Chicago, Chicago, 1930, pl. 40. Recent scholarship suggests that the actual battle occurred in the shallow waters near the entrance of the eastern (Pelusiac) branch of the Nile.

95 The Sea People was the name used by the Ancient Egyptians to describe a wave of immigrants, including people later known as the Philistines and Achaeans, who were defeated when they invaded the Egyptian Delta by land and by sea. The Sea People did successfully overthrow

many city-states throughout the Eastern Mediterranean. They were known to the Egyptians from earlier attacks and indeed some Sea People were hired as Egyptian mercenaries.

96 Shelly Wachsmann, 'Paddled and Oared Ships before the Iron Age' in R. Gardiner and J. Morrison, *The Age of the Galley, Mediterranean Oared Vessels Since Pre-Classical Times*, Conway, London, 1995, pp. 28-34.

97 The lion head bows have sometimes mistakenly been interpreted as an early bow ram; however, Ancient Egyptian ship construction could not have supported the forces generated in a situation where such decorative features purposely rammed another vessel.

98 During the Third Intermediate Period, the abundant military titles may help to conceal many maritime titles, and it is feasible that the total number of ships in the two or three rival fleets may have, at times, out numbered the late New Kingdom royal fleet.

99 Gilbert, *Weapons, Warriors and Warfare in Early Egypt*, pp. 31-32.

100 Anthony Spalinger estimates that the maximum number of regular troops in the Egyptian army of the New Kingdom was between 30,000 and 40,000, of which some 20,000 were at the Battle of Kadesh with King Rameses II. See: A.J. Spalinger, *War in Ancient Egypt*, Blackwell Publishing, Malden, MA, 2005, pp. 229-230 and 232.

101 For instance, the characteristics of modern maritime power from Royal Australian Navy, *Australian Maritime Doctrine, RAN Doctrine 1*, Defence Publishing Service, Canberra, 2000, pp. 48-51, include: mobility in mass, readiness, access, flexibility, adaptability, reach, resilience, poise and persistence. These do also apply, although in a slightly modified form, when the characteristics of Ancient Egyptian maritime power are examined.

102 This book is influenced by the modern concepts of maritime roles and tasks used by a number of today's navies, which in turn were developed using the theoretical models in Ken Booth, *Navies and Foreign Policy*, Croom Helm, London, 1977, pp. 15-26; and Eric Grove, *The Future of Sea Power*, Naval Institute Press, Annapolis, MD., 1990, pp. 221-241. The more recent work of Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004, is also important, although his theoretical constructs have yet to be fully integrated into current naval doctrine.

103 For example see: Royal Navy, *BR 1806, British Maritime Doctrine*, 3rd edition, The Stationary Office, London, 2004, esp. pp. 57-90; and Royal Australian Navy, *Australian Maritime Doctrine*, pp. 55-72. Both of these documents are intended to establish the enduring aspects of the application of maritime power.

104 See Appendix 2 for discussions of military, diplomatic and constabulary roles.

105 Thucydides, *The History of the Peloponnesian War*, translated by Rex Warner, Penguin Classics, Harmondsworth, 1954 (numerous reprints), I.4.

106 The Egyptian experience resonates to some degree with the current status of the United States Navy in world affairs. Note that it was during the first millennium BCE, with the rise of the Persian and Greek rival maritime powers in the Middle East and Mediterranean, that

led to bipolar and multipolar maritime circumstances. The rise of navies during this later phase of ancient history will be examined in the next work to be published on international sea power.

107 Thucydides, *The History of the Peloponnesian War*, I.5, and for the 'Report of Wenamon', see pp. 97-102. The Egyptian trade operated within a larger East Mediterranean trade network, and as Egyptian trade diminished it would have been taken up by the palace economies or city-states of Syria and Greece.

108 Trade protection was an essential part of Egyptian sea power.

109 See pp. 34-35 and 81-83.

110 Till, *Seapower: A Guide for the Twenty-First Century*, pp. 237-238. Although the idea that expeditions are a construct of Western philosophy is a modern assumption that is not supported when one considers the large number of expeditions conducted by non-Western states prior to the recent dominance of the Western powers.

111 The use of the English navy by Parliamentarian forces during the English Civil Wars of the 17th century CE is a classic example of this; see: John R. Powell, *The Navy in the English Civil War*, Archon Books, London, 1962. Of course it may not be politically correct for modern navies to plan for such operations during civil wars, but recent events in Sri Lanka show that such tasks remain relevant.

112 For complete chronology see Shaw, *The Oxford History of Ancient Egypt*, pp. 479-483.

113 Refer to bibliography for complete details.

114 Some discussion may be found in W. Hamblin, *Warfare in the Ancient Near East to 1600 BC*, Routledge, London, 2006, pp. 326-327, 366-367 and 451-455.

115 The traditional regions within Egypt were called nomes by the Greeks, and each nome was ruled by a nomarch.

116 Whereas the Predynastic chiefdoms and city-states evolved due to pressures such as population, geography and communications, the Egyptian state was consolidated by reorganising these regional centres into administrative nomes that could be controlled by the centralised royal power.

117 Translations by author based on Jacques Vandier, *Mo'alla: la tombe d'Ankhtifi et la tombe de Sébekhotep*, Institut Francais d'Archéologie Orientale, Cairo, 1950.

118 BAR § I.396.

119 BAR § I.401.

120 BAR § I.401.

121 BAR § I.423.

122 BAR § I.4I23H.

123 BAR §I.465.

124 For full translation of the 'Tale of Sinuhe' see: Miriam Lichtheim, *Ancient Egyptian Literature, vol. II: The New Kingdom*, University of California Press, Berkeley, 1976, pp. 222-235.

125 At first the only other territorial state in the region was in Mesopotamia, and the Mesopotamians did not directly invade Egypt. The Hittites did fight the Egyptians in Syria, but they also did not directly invade Egypt. The Hyksos, Libyans, Nubians and Sea People did invade Egypt at one time or another, but they were essentially loose coalitions of raider/traders or invader/immigrants from neighbouring city-states or chiefdoms, and not the military forces of rival territorial states.

126 Lichtheim, AEL I.129-130.

127 Miriam Lichtheim, *Ancient Egyptian Autobiographies Chiefly of the Middle Kingdom: A Study and an Anthology*, Vandenhoeck and Ruprecht, Göttingen, 1988, No. 42. The 'Osiris mysteries' were like a passion play where the rituals surrounding the life and death of Osiris, the god of the afterlife, were re-enacted.

128 Manfred Bietak has suggested that Avaris may be equated with the Egyptian New Kingdom royal harbour Perunefer, however, it is more likely that the main New Kingdom Egyptian fleet was based at Memphis while Avaris was maintained as an important naval base. See: S.R.K. Glanville, 'Records of a Royal Dockyard of the Time of Thutmose III: Papyrus British Museum 10056', *Zeitschrift für ägyptische Sprache und Altertumskunde (ZÄS),* vol. 66, 1931, pp. 105-121, and vol. 68, 1932, pp. 7-41; and David Jeffreys, 'Perunefer: at Memphis or Avaris?' *Egyptian Archaeology*, No. 28, Spring 2006, pp. 36-37.

129 Translations based on those of J.A. Wilson in James B. Pritchard, (ed), *The Ancient Near East, vol. II: A New Anthology of Texts and Pictures*, Princeton University Press, New Jersey, 1975, pp. 90ff.

130 Translations by author from the New Kamose Stele, in Labib Habachi, *The Second Stela of Kamose and his Struggle Against the Hyksos Ruler and his Capital*, J.J. Augustin, Gluckstadt, 1972.

131 Translations by author from the New Kamose Stele, in Habachi, *The Second Stela of Kamose.*

132 Translation by author from Kurt Sethe, *Urkunden des ägyptischen Altertums. Abt IV, Urkunden der 18. Dynastie*, Leipzig and Berlin, 1905-1958, pp. 1-4, (Sethe, Urk IV.1-4).

133 Translation by author from Sethe, Urk IV.5-6.

134 The cyclic nature of Egyptian civilisation may be noted; during Pharaonic times about 500 years of strong government was followed by 200 or more years of collapse. The central elements of Egyptian culture did; however, remain intact throughout these changes, and it was only with the increasing influence of Greece and Rome, coupled with the introduction of Christianity, that led to the final collapse of Egyptian Pharaonic culture. But even then, some elements of Ancient Egyptian culture have also survived to this day.

135 BAR § III.491.

136 See: Steven Snape, 'Ramesses II's Forgotten Frontier', *Egyptian Archaeology*, No. 11, 1997, pp. 23-24; and S. Snape, 'Neb-Re and the heart of darkness: the latest discoveries from Zawiyet Umm el Rakham (Egypt)', *Antiquity*, vol. 75, No. 287, 2001, pp. 19-20.

137 BAR § III.579 and 583. Much of the text centres upon the battle fought on land between the forces. The casualty lists provide approximate numbers, Libyans numbered around 4000 men, the Sea People units numbering between 250 and 800 each, with the total number of Sea People slain or captured numbering under 2500.

138 BAR § VI.65-66.

139 BAR § I.652.

140 BAR § I.657.

141 Although scientific investigation of the western Delta branches continues to provide new evidence, it is likely that the Canopic branch was not navigable until the Late Period (664-332 BCE). From that time Thonis (the Greek Heracleion located at the mouth of the Canopic branch) or Rhacotis (the early town on the site that was to become Alexandria) would have been the frontier post for Greek trade with the harbour city of Naucratis, and Sais would have been connected to Naucratis and the Canopic branch by a canal. The Rosetta branch may have continued to be used for other non-Greek trade.

142 BAR § II.916.

143 Perunefer was the name for the fleet base and dockyard at Memphis, see Jeffreys, 'Perunefer: at Memphis or Avaris?'

144 Säve-Söderbergh, *The Navy of the Eighteenth Egyptian Dynasty*.

145 See: Mark Lehner, *The Complete Pyramids*, Thames and Hudson, London, 1997, esp. pp. 16-17, 202-205; and Chapter 2, 'Resurrection Machine' in Vivian Davies and Renée Friedman, *Egypt*, British Museum Press, London, 1998, pp. 52-107.

146 Translation by author from Kurt Sethe, *Urkunden des ägyptischen Altertums. Abt I, Urkunden des Alten Reiches*, 2nd edn, Leipzig, 1932-1933, p. 99, (Urk I.99).

147 Translation by author from Sethe Urk I.107-108.

148 BAR § I.442, 447 and 453.

149 BAR § I520-521.

150 BAR § IV.19; note part of the text is lost.

151 Trade in high quality wines and oils were intended for consumption and prestige; the consumption of a fine wine was every bit as much a status symbol as it is today.

152 BAR § I.520-521.

153 Norman de G. Davis and Raymond O. Faulkner, 'A Syrian Trading Venture to Egypt', *Journal of Egyptian Archaeology*, vol. 33, 1947, pp. 40-46, pl. 8.

154 For the character of Egypt's Empire see Shaw, *The Oxford History of Ancient Egypt*, pp. 324-327.

155 See pp. 56-57 on Semna.

156 The Nubian A-Group cultures occupied Lower Nubia between 3500 and 2800 BCE. See: Shaw, *The Oxford History of Ancient Egypt*, pp. 321-322.

157 BAR § I.146.

158 Translation by author from Sethe Urk I.106-107.

159 Translation by author from Sethe Urk I.108-109.

160 The Nubian C-Group cultures occupied Lower Nubia between 2300 and 1500 BCE. See: Shaw, *The Oxford History of Ancient Egypt*, pp. 321-322.

161 The rulers of Kush controlled Upper and Lower Nubia until about 1500 BCE when they were overthrown by the Egyptian New Kingdom kings. The Egyptians used the term Kush to refer to the region of central Sudan in the vicinity of modern Khartoum, and during the New Kingdom they ruled the region through an Egyptian viceroy called the 'King's Son of Kush'.

162 Translation by author from Habachi, *Sixteen Studies on Lower Nubia*, 1981, Fig. 5.

163 BAR § I.519.

164 Richard B. Parkinson, *Voices from Ancient Egypt*, British Museum Press, London, 1991, No. 31.

165 BAR § I.647, and 657-658.

166 BAR § I.687.

167 Torgny Säve-Söderbergh, *Aegypten und Nubien*, Hakon Ohlssons Boktrykeri, Lund, 1941, p. 120.

168 See pp. 48-50.

169 Translation by author from Sethe Urk IV.5.

170 Translation by author from Sethe Urk IV.6-7.

171 Translation by author from Sethe Urk IV.7-9.

172 BAR § II.75.

173 BAR § II.76.

174 BAR § II.121-122.

175 BAR § II.828.

176 BAR § II.845.

177 BAR § II.1038.

178 BAR § IV.599.

179 For the Third Intermediate Period in Egypt see: Shaw, *The Oxford History of Ancient Egypt*, pp. 330-368.

180 For example see: Ian Shaw, 'Life on the Edge: Gemstones, Politics and Stress in the Deserts of Egypt and Nubia' in Renée Friedman (ed.), *Egypt and Nubia: Gifts of the Desert*, British Museum Press, London, 2002, pp. 244-251.

181 See: Dietrich D. Klemm, Rosemarie Klemm and Andreas Murr, 'Ancient Gold Mining in the Eastern Desert of Egypt and the Nubian Desert of Sudan' in Friedman, *Egypt and Nubia: Gifts of the Desert*, pp. 215-221.

182 Translation by author from Sethe Urk I.101-105; if not located in South Sinai, the sand dwellers were probably nomads of the Eastern Desert living along the Red Sea coast.

183 Greg Mumford and Sarah Parcak, 'Pharaonic Ventures into South Sinai: El Markha Plain Site 346', *Journal of Egyptian Archaeology,* vol. 89, 2003, pp. 88-92.

184 Alan H. Gardiner and T. Eric Peet, *The Inscriptions of Sinai,* vol. II, Egypt Exploration Society, London, 1955, No. 17.

185 BAR § I.471.

186 BAR § I.713.

187 BAR § I.718.

188 Some 59 inscriptions attributed to the reign of Amenemhat III have been found in the Sinai area.

189 BAR § II.877.

190 BAR § IV.408-409, note that the level of detail found in writings on papyrus is much greater than that found on the rock inscriptions in the Sinai.

191 Philippe Beaujard, 'The Indian Ocean in Eurasian and African World-Systems before the Sixteenth Century', *Journal of World History*, vol. 16, 2005, pp. 411-467, discusses the rise of towns and states and the expansion of trading networks from the 4th millennium BCE.

192 See previous discussion on Punt, Endnote 6 on p. 139.

193 Translation by author from Sethe Urk I.140-141.

194 Translation by author from Sethe Urk I.134; the 'Byblos' ship is a seagoing vessel probably designed initially for the regular route to and from Byblos in the Mediterranean Sea. 'Byblos' ships were not operated by the ruler of Byblos but by the Egyptians.

195 Fabre, *Seafaring in Ancient Egypt*, p. 40.

196 BAR § IV.420-433.

197 See previous discussions at Endnote 91 on p. 145.

198 BAR § IV.420-433.

199 Lichtheim, AEL II, p. 212; for alternative translation see Parkinson, *The Tale of Sinuhe and Other Ancient Egyptian Poems 1940-1640 BC*.

200 Lichtheim, AEL II, p. 214.

201 Lichtheim, AEL II, p. 214.

202 BAR § II.243.

203 BAR § II.255-257.

204 BAR § II.265.

205 BAR § II.266.

206 BAR § IV.407.

207 Peter Bellwood, *First Farmers: The Origins of Agricultural Societies*, Blackwell, Oxford, 2005, pp. 99-103.

208 Shaw, *The Oxford History of Ancient Egypt*, pp. 320-322, and 327-328.

209 By the later part of the Predynastic period, the Egyptian acacia and tamarisk forests had been over-exploited and hence good quality cedar wood for shipbuilding and other purposes were imported from the Lebanon.

210 See the summary in Wengrow, *The Archaeology of Early Egypt*, pp. 135-150.

211 BAR § I.146.

212 See previous p. 33.

213 Translation by author from Sethe Urk I.140-141.

214 Translation by author from Sethe Urk I.104-105.

215 Lichtheim, AEL I, p. 231.

216 See: B. Porter and R.L.B. Moss, *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings. VII. Nubia, Deserts and Outside Egypt*, Griffith Institute, Oxford, 1951 (reprinted 1995), p. 393: Note that the trade between the Syrian coastal cities and elites in other parts of the Eastern Mediterranean were also quite strong at this time, and it is likely that many Egyptian goods were traded elsewhere onboard Syrian tramping vessels, Wachsmann, *Seagoing Ships and Seamanship in the Bronze Age Levant*, pp. 303-315.

217 See p. 33.

218 BAR § I.680-681.

219 Naharin was the Egyptian term for the region of the northern Euphrates where the Mitannian kingdom was located. The Mitanni were an alliance of peoples who were the major opponents to Egyptian influence in northern Syria. After Thutmose III's invasion, the Mitanni were weakened, and by the beginning of the Ramessid Period they had been supplanted by the rising Hittite power.

220 Translation by author from Sethe Urk IV.9-10.

221 BAR § II.125.

222 King Thutmose III ruled Egypt for some 54 years, from 1479 to 1425 BCE. Historical background may be found in Shaw, *The Oxford History of Ancient Egypt*, pp. 218-271, and esp. 243-248.

223 The campaigns are described in Donald Redford, *The Wars in Syria and Palestine of Thutmose III*, Brill, Leiden, 2003, pp. 185-244.

224 Spalinger, *War in Ancient Egypt*, p. 83.

225 For the Battle of Megiddo see Spalinger, *War in Ancient Egypt*, pp. 83-95; BAR § II.407-443; and Lichtheim, AEL II, pp. 29-35.

226 Expeditionary operations are military operations that can be initiated at short notice, consisting of forward deployed, or rapidly deployable, self-sustaining forces tailored to achieve a clearly stated objective in a foreign country. Royal Navy, *BR1806: British Maritime Doctrine*, p. 257.

227 Spalinger, *War in Ancient Egypt*, p. 110.

228 Archaeology has confirmed that Tunip is beneath the modern town of Baalbeck in Lebanon.

229 Translation by author from Sethe, Urk IV.686-687. [Translations from 'The Annals of Thutmose III' are found in Sethe, Urk IV.645-734.]

230 Hieroglyphs and translation from Sethe, Urk IV.689.

231 Translation by author from Sethe, Urk IV.692-693.

232 Translation by author from Sethe, Urk IV.696-7.

233 Translation by author from Sethe, Urk IV.697.

234 Translation by author from Sethe, Urk IV.700.

235 From the 'Gebel Barkal Stele of Thutmose III' in Sethe, Urk.IV.1227-1243.

236 The locations of many of these cities are disputed, but some scholars believe Niy was situated on the Euphrates. The cities of Sendjar and Takhsy would then have been located between the Euphrates and the Orontes Rivers. The Prince of Kadesh probably did not expect the Egyptian expedition to approach his city from the north.

237 BAR § II.783; Amenhotep III's campaigns included campaigns on the Orontes and through Niy.

238 BAR § I.680-681.

239 The Late Bronze Age societies of the Eastern Mediterranean are covered by Wachsmann, *Seagoing Ships and Seamanship in the Bronze Age Levant*.

240 Pryor, 'The Geographical Conditions of Galley Navigation in the Mediterranean'.

241 There were also lesser trade routes that connected those regions not lying near the major route, involved in the tramping trade; of course many trading expeditions under Egyptian royal authority would have continued to use the direct Byblos route.

242 See: William L. Moran, *The Amarna Letters*, John Hopkins University Press, Baltimore, 1992.

243 BAR § III.94.

244 S. Langdon and Alan H. Gardiner, 'The Treaty of Alliance between Hattuṣili, King of the Hittites, and the Pharaoh Ramesses II', *Journal of Egyptian Archaeology*, vol. 6, 1920, pp. 179-205; and Kenneth A. Kitchen, *Pharaoh Triumphant*, Aris and Philips, Warminster, 1982, pp. 75-79.

245 BAR § IV.211.

246 BAR § III.441-442.

247 See: Richard A. Gould, *Archaeology and the Social History of Ships*, Cambridge University Press, Cambridge, 2000, pp. 150-167.

248 Lichtheim, AEL II, pp. 224-229.

249 The figures used for this analysis are indicative of the employment of Ancient Egyptian maritime forces, as detailed records of maritime operations on an annual basis do not exist for Ancient Egypt.

250 For example see the recent study Patrick H. Roth, 'Sailors as Infantry in the US Navy', October 2005, Navy Department Library, Naval Historical Centre, Washington, on their website at <www.history.navy.mil/library/online/naval_infantry.htm> (5 January 2007).

251 This is the number of recorded maritime operations for each period from Appendix 1.

252 The rise of navies during the 1st Millennium BCE, which includes the rise of Phoenician, Persian and Greek sea power, will form part of a separate future study. The role of the Egyptian navy during the Late Period (664-332 BCE) will be an important element of that story.

253 See: Robert Drews, *The End of the Bronze Age, Changes in Warfare and the Catastrophe ca. 1200 B.C.*, Princeton University Press, Princeton, 1993, who provides a good overview of the period before giving his military explanation for the collapse.

254 Royal Navy, *BR 1806, British Maritime Doctrine*, 2004, esp. pp. 29-30.

255 The Greek maritime force that attacked Troy, as described in Homer's *Illiad*, is a good example of one such coalition of raider/traders; see Homer, *The Illiad*, translated by E.V. Rieu, Penguin Classics, Harmondsworth, 1956 (numerous reprints).

256 Henry Ormerod, *Piracy in the Ancient World*, Argonaut, Chicago, 1924 (reprinted 1967); and Philip de Souza, *Piracy in the Greco-Roman World*, Cambridge University Press, Cambridge, 1999, pp. 15-42.

257 Wachsmann, *Seagoing Ships and Seamanship in the Bronze Age Levant*, pp. 317-332.

258 See: the 'Report of Wenamun' on pp. 97-102.

259 See: Lionel Casson, *Ships and Seafaring in Ancient Times*, British Museum Press, London, 1994, pp. 51-53.

260 Of course, the campaign against the sand dwellers probably killed a high proportion of the nomadic population in the region to gain the desired strategic effects. This would be called a massacre in today's environment. See: Weni's campaigns, pp. 58-59.

261 See: Ahmose (son of Ebana), pp. 50-52.

262 Soft power is a term used in international relations theory to describe the ability of a political body, such as a state, to indirectly influence the behavior or interests of other political bodies through cultural or ideological means. See: Joseph S. Nye, *Soft Power: The Means to Success in World Politics*, Public Affairs, New York, 2004.

263 This Appendix is based largely upon the Australian doctrine, Royal Australian Navy, *Australian Maritime Doctrine*, pp. 55-72, although the British doctrine is also relevant, Royal Navy, *BR 1806, British Maritime Doctrine*, 2004, esp. pp. 57-90. Both of these documents are intended to establish the enduring aspects of the application of maritime power.

264 'In harm's way' and 'to fight and win at sea' are part of many modern navy's military ethos.

BIBLIOGRAPHY

Adams, B. and Cialowicz, K.M., *Protodynastic Egypt*, Shire Publications, Princes Risborough, Buckinghamshire, 1997.

Beaujard, P., 'The Indian Ocean in Eurasian and African World-Systems before the Sixteenth Century', *Journal of World History*, vol. 16, 2005, pp. 411-467.

Bellwood, P., *First Farmers: The Origins of Agricultural Societies*, Blackwell, Oxford, 2005.

Bietak, M. 'Zur Marine des Alten Reiches', in J. Baines, T.G.H. James, A. Leahy and A.F. Shore, *Pyramid Studies and other Essays Presented to IES Edwards*, Egypt Exploration Society, London, 1988, pp. 35-40.

Bishop, C.W., 'Long-Houses and Dragon-Boats', *Antiquity*, vol. 12, 1938, pp. 411-424.

Booth, K., *Navies and Foreign Policy*, Croom Helm, London, 1977.

Borchardt, L., *Das Grabdenkmal des Königs Sah-ure*, Band II, Die Wandbilder, Leipzig, 1913.

Breasted, J.H., *Ancient Records of Egypt*, 5 vols, University of Chicago Press, Chicago, 1906, (reprinted 2001).

Brovarski, E. and Murnane, W.J., 'Inscriptions from the Time of Nebhepetre Mentuhotep II at Abisko', *Serapis*, vol. 1, No. 1, 1969, pp. 11-33.

Casson, L., *Ships and Seafaring in Ancient Times*, British Museum Press, London, 1994.

Corbett, J.S., *Some Principles of Maritime Strategy*, Longmans, Green and Co., London, 1911.

Davies, N. de G., *Private Tombs at Thebes, Vol. IV, Scenes from Some Theban Tombs*, Griffith Institute, Oxford, 1963.

Davies, N. de G., *The Tomb of Rekh-Mi-Re at Thebes II*, Egyptian Expedition Publications Vol. XI - Plates, New York, 1943.

Davis, N. de G., and Faulkner, R.O., 'A Syrian Trading Venture to Egypt', *Journal of Egyptian Archaeology*, vol. 33, 1947, pp. 40-46.

Davies, V. and Friedman, R., *Egypt*, British Museum Press, London, 1998.

De Souza, P., *Seafaring and Civilization: Maritime Perspectives on World History*, Profile Books, London, 2002.

De Souza, P., *Piracy in the Greco-Roman World*, Cambridge University Press, Cambridge, 1999.

Drews, R., *The End of the Bronze Age, Changes in Warfare and the Catastrophe ca. 1200 B.C.*, Princeton University Press, Princeton, 1993.

Fabre, D., *Seafaring in Ancient Egypt*, Periplus, London, 2005.

Faulkner, R.O., *The Ancient Egyptian Pyramid Texts*, Clarendon Press, Oxford, 1969.

Faulkner, R.O., 'Egyptian Military Organisation', *Journal of Egyptian Archaeology*, vol. 39, 1953, pp. 32-47.

Friedman, R. (ed.), *Egypt and Nubia: Gifts of the Desert*, British Museum Press, London, 2002.

Gardiner, A.H., *Egyptian Grammar*, 3rd edn, Griffith Institute, Oxford, 1957.

Gardiner, A.H., *Hieratic Papyri in the British Museum*, 3rd ser., 2 vols, British Museum, London, 1935.

Gardiner, A.H., and Peet, T.E., *The Inscriptions of Sinai*, vol. 2, Egypt Exploration Society, London, 1955.

Garstang, J., *El Arabah*, Quaritch, London, 1901.

Gilbert, G.P., *Weapons, Warriors and Warfare in Early Egypt*, BAR International Series 1208, Archaeopress, Oxford, 2004.

Gilbert, G.P., *Prehistoric Expeditions on the Nile: Boat Depictions on Prehistoric Egyptian Pottery*, MA Thesis, Macquarie University, Sydney, 1998.

Glanville, S.R.K., 'Records of a Royal Dockyard of the Time of Thutmose III: Papyrus British Museum 10056', *Zeitschrift für ägyptische Sprache und Altertumskunde* (ZÄS), vol. 66, 1931, pp. 105-121; and vol. 68, 1932, pp. 7-41.

Gnirs, A.M., *Militär und Gesellschaft. Ein Beitag zur Sozialgeschichte des Neuen Reiches*, Heidelberger Orientverlag, Heidelberg, 1996.

Gould, R.A., *Archaeology and the Social History of Ships*, Cambridge University Press, Cambridge, 2000.

Grajetzki, W., *The Middle Kingdom of Ancient Egypt*, Duckworth, London, 2006.

Griffith, F.L., *The Inscriptions of Siût and Dêr Rîfeh*, Trübner, London, 1889.

Grove, E., *The Future of Sea Power*, Naval Institute Press, Annapolis, MD., 1990.

Habachi, L., *The Second Stela of Kamose and his Struggle Against the Hyksos Ruler and his Capital*, J.J. Augustin, Gluckstadt, 1972.

Habachi, L., *Sixteen Studies on Lower Nubia*, Institut Francais d'Archéologie Orientale, Cairo, 1981.

Habachi, L., 'Two Graffiti at Sehel from the Reign of Queen Hatshepsut', *Journal of Near Eastern Studies*, vol. 16, 1957, pp. 88-104.

Haddon, A.C., and Hornel, J., *Canoes of Oceania*, Bishop Museum Press, Honolulu, 1936 (reprinted 1975).

Haldane, C.W., and Patch, D.C., *The Pharaoh's Boat at the Carnegie*, The Carnegie Museum of Natural History, Pittsburgh, 1990.

Hall, E.S., *The Pharaoh Smites his Enemies, A Comparative Study*, Münchner Ägypologische Studien 45, Deutcher Kunstverlag, Munich, 1986.

Hamblin, W.J., *Warfare in the Ancient Near East to 1600 BC*, Routledge, London, 2006.

Hammond, N., 'Red Sea timbers provide a raft of knowledge', *The Times*, 6 March 2006, <www.timesonline.co. uk/article/0,,61-2071279,00.html> (15 May 2006).

Hanson, V.D., *Why the West has Won*, Faber and Faber, London, 2001.

Hayes, W.C., 'Horemkhauef of Nekhen and His Trip to IT-Towe', *Journal of Egyptian Archaeology*, vol. 33, 1947, pp. 3-11, and pl. 2.

Helck, W., 'Ein Feldzug unter Amenophis IV gegen Nubien', *Studien zur Altägyptischen Kultur*, vol. 8, 1980, pp. 117-126.

Herodotus, *The Histories*, translated by Robin Waterfield, Oxford University Press, Oxford, 1998.

Homer, *The Illiad*, translated by E.V. Rieu, Penguin Classics, Harmondsworth, 1956 (numerous reprints).

Jeffreys, D., 'Perunefer: at Memphis or Avaris?' *Egyptian Archaeology*, No. 28, Spring, 2006, pp. 36-37.

Jenkins, N., *The Boat Beneath the Pyramid*, Thames and Hudson, London, 1980.

Jones, D., *Egyptian Bookshelf: Boats*, British Museum Press, London 1995.

Jones, D., *A Glossary of Ancient Egyptian Nautical Titles and Terms*, Kegan Paul, London, 1988.

Junker, H., *Gîza II*, Hölder-Pichler-Tempsky, Wein-Leipzig, 1934.

Kemp, B.J., *Ancient Egypt, Anatomy of a Civilization*, 2nd edn, Routledge, London, 2006.

Kitchen, K.A., *Pharaoh Triumphant*, Aris and Philips, Warminster, 1982.

Kitchen, K.A., *Ramesside Inscriptions, Translated and Annotated. Notes and Comments I*, Blackwell, Oxford, 1993.

Köhler, E.C., 'History or Ideology?: New Reflections on the Narmer Palette and the Nature of Foreign Relations in Predynastic Egypt', in: E.T. Levy and E.C.M. van den Brink (eds), *Egypt and the Levant*, Leicester University Press, London, 2002, pp. 499-513.

Landström, B., *Ships of the Pharaohs: 4000 Years of Egyptian Shipbuilding*, Doubleday, New York, 1970.

Lane, E.W., *An Account of the Manners and Customs of the Modern Egyptians, Written in Egypt During the Years 1833-1835*, East-West Publications, The Hague and London, 1978 (first published 1836).

Langdon S., and Gardiner, A.H., 'The Treaty of Alliance between Hattusili, King of the Hittites, and the Pharaoh Ramesses II', *Journal of Egyptian Archaeology*, vol. 6, 1920, pp. 179-205.

Lehner, M., *The Complete Pyramids*, Thames and Hudson, London, 1997.

Lichtheim, M., *Ancient Egyptian Literature, vol. I: The Old and Middle Kingdoms, and vol. II: The New Kingdom*, University of California Press, Berkeley, 1973 and 1976.

Lichtheim, M., *Ancient Egyptian Autobiographies Chiefly of the Middle Kingdom: A Study and an Anthology*, Vandenhoeck and Ruprecht, Göttingen, 1988.

Lynn, J.A., *Battle: A History of Combat and Culture*, Westview Press, Cambridge, MA., 2003.

Mahan, A.T., *The Influence of Sea Power upon History 1660-1783*, Little, Brown and Company, Boston, 1890.

Mariette, A., *Deir el-Bahari: documents topographiques, historiques et ethnographiques recueillis dans ce temple pendant les fouilles executées par Auguste Mariette-bey*, J.C. Hinricks, Leipzig, 1877.

McDermott, B., *Warfare in Ancient Egypt*, Sutton Publishing, Stroud, Gloucestershire, 2004.

Moran, W.L., *The Amarna Letters*, John Hopkins University Press, Baltimore, 1992.

Mumford, G. and Parcak, S., 'Pharaonic Ventures into South Sinai: El Markha Plain Site 346', *Journal of Egyptian Archaeology*, vol. 89, 2003, pp. 88-92.

Nelson, H.H., et al, *Earlier Historical Records of Ramses III, Medinat Habu, vol. 1, The Epigraphic Survey of the Oriental Institute*, University of Chicago, Chicago, 1930.

Newberry, P.E., *Beni Hasan, vol. 1*, Trübner, London, 1893.

Nye, J.S., *Soft Power: The Means to Success in World Politics*, Public Affairs, New York, 2004.

Ormerod, H., *Piracy in the Ancient World*, Argonaut, Chicago, 1924 (reprinted 1967).

Padfield, P., *Maritime Supremacy and the Opening of the Western Mind*, John Murray, London, 1999.

Parkinson, R.B., *The Tale of Sinuhe and Other Ancient Egyptian Poems 1940-1640 BC*, Oxford University Press, Oxford, 1997.

Parkinson, R.B., *Voices from Ancient Egypt*, British Museum Press, London, 1991.

Partridge, R.B., *Fighting Pharaohs, Weapons and Warfare in Ancient Egypt*, Peartree Publishing, Manchester, 2002.

Petrie, W.M.F., *Koptos*, Quaritch, London, 1896.

Petrie, W.M.F. and Quibell, J.E., *Naqada and Ballas*, Quaritch, London, 1896.

Porter, B., and Moss, R.L.B., *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings. VII. Nubia, Deserts and Outside Egypt*, Griffith Institute, Oxford, 1951 (reprinted 1995). [PM VII]

Powell, J.R., *The Navy in the English Civil War*, Archon Books, London, 1962.

Pritchard, J.B. (ed.), *The Ancient Near East, vol. II: A New Anthology of Texts and Pictures*, Princeton University Press, New Jersey, 1975.

Pryor, J.H., 'The Geographical Conditions of Galley Navigation in the Mediterranean', in R. Gardiner and J. Morrison, *The Age of the Galley, Mediterranean Oared Vessels Since Pre-Classical Times*, Conway, London, 1995, pp. 206-216.

Quibell, J.E., *Hierakonpolis I*, Quaritch, London, 1900.

Quibell, J.E., and Green, F.W., *Hierakonpolis II*, Quaritch, London, 1902.

Redford, D., *The Wars in Syria and Palestine of Thutmose III*, Brill, Leiden, 2003.

Redford, D., *Egypt, Canaan and Israel in Ancient Times*, Princeton University Press, New Jersey, 1992.

Renfrew, C. and Bahn, P., *Archaeology: Theories, Methods and Practice*, 3rd edn, Thames and Hudson, London, 2000.

Roger, N.A.M., *The Safeguard of the Sea, A Naval History of Britain, Volume One 660-1649*, Harper Collins, London, 1997.

Roth, P.H., 'Sailors as Infantry in the US Navy', October 2005, Navy Department Library, Naval Historical Centre, Washington, <www.history.navy.mil/library/online/naval_infantry.htm> (5 January 2007).

Royal Australian Navy, *Australian Maritime Doctrine, RAN Doctrine 1*, Defence Publishing Service, Canberra, 2000.

Royal Navy, *BR 1806, British Maritime Doctrine*, 3rd edn, The Stationary Office, London, 2004.

Säve-Söderbergh, T., *The Navy of the Eighteenth Egyptian Dynasty*, Uppsala Universitets Arsskrift No. 6, Uppsala, 1946.

Säve-Söderbergh, T., *Aegypten und Nubien*, Hakon Ohlssons Boktrykeri, Lund, 1941.

Sayed, A.M., 'Discovery of the 12th Dynasty Port at Wadi Gawasis on the Red Sea Shore' in *Abstracts of Papers: First Congress on Egyptology*, Munich, 1976, pp. 106ff.

Schulman, A.R., *Military Rank, Title and Organisation in the Egyptian New Kingdom*, B. Hessling, Berlin, 1964.

Sethe, K., *Urkunden des ägyptischen Altertums. Abt I, Urkunden des alten Reiches*, 2nd edn, Leipzig, 1932-1933. [Urk I]

Sethe, K., *Urkunden des ägyptischen Altertums. Abt IV, Urkunden der 18. Dynastie*, Leipzig and Berlin, 1905-1958. [Urk IV]

Shaw, I. (ed.), *The Oxford History of Ancient Egypt*, Oxford University Press, Oxford, 2000.

Smither, P.C., 'The Semna Despatches', *Journal of Egyptian Archaeology*, vol. 31, 1945, pp. 3-10, and pls. 1-7.

Snape, S., 'Ramesses II's Forgotten Frontier', *Egyptian Archaeology*, No. 11, 1997, pp. 23-24.

Snape, S., 'Neb-Re and the heart of darkness: the latest discoveries from Zawiyet Umm el Rakham (Egypt)', *Antiquity*, vol. 75, No. 287, 2001, pp. 19-20.

Spalinger, A.J., *War in Ancient Egypt*, Blackwell Publishing, Malden, MA, 2005.

Thucydides, *The History of the Peloponnesian War*, translated by Rex Warner, Penguin Classics, Harmondsworth, 1954 (numerous reprints).

Till, G., *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004.

Till, G. (ed.), *Seapower at the Millennium*, Sutton Publishing, Stroud, Gloucestershire, 2001.

Tin-bor Hui, V., *War and State Formation in Ancient China and Early Modern Europe*, Cambridge University Press, Cambridge, 2005.

Trigger, B.G., *Understanding Early Civilizations: A Comparative Study*, Cambridge University Press, Cambridge, 2003.

Vandier, J., *Mo'alla: la tombe d'Ankhtifi et la tombe de Sébekhotep*, Institut Francais d'Archéologie Orientale, Cairo, 1950.

Vergano, D., 'In the Egyptian desert, a surprising nautical find', *USA Today*, 5 March 2006, <www.usatoday.com/tech/science/columnist/vergano/2006-03-05-egyptian-ship_x.htm> (15 May 2006).

Vinson, S., *The Nile Boatman at Work*, Münchner Ägyptologische Studien 48, Philipp von Zabern, Mainz, 1998.

Vinson, S., *Egyptian Boats and Ships*, Shire Publications, Princes Risborough, Buckinghamshire, 1994.

Wachsmann, S., 'Paddled and Oared Ships before the Iron Age' in R. Gardiner and J. Morrison, *The Age of the Galley, Mediterranean Oared Vessels Since Pre-Classical Times*, Conway, London, 1995, pp. 10-34.

Wachsmann, S., *Seagoing Ships and Seamanship in the Bronze Age Levant*, Chatham Publishing, London, 1998.

Ward, C.A., *Sacred and Secular: Ancient Egyptian Ships and Boats*, Archaeological Institute of America Monographs No. 5, University of Pennsylvania Museum, Philadelphia, 2000.

Wengrow, D., *The Archaeology of Early Egypt*, Cambridge University Press, Cambridge, 2006.

Wetterstrom, W., 'Foraging and Farming in Egypt', in T. Shaw, et al (eds), *The Archaeology of Africa: Food, Metals and Towns*, London, 1993, pp. 184-85.

Winlock, H.E., *Models of Daily Life in Ancient Egypt*, Harvard University Press, Cambridge, Massachusetts, 1955.

Yadin, Y., *The Art of Warfare in Biblical Lands*, 2 vols, McGraw-Hill, New York, 1963.

Zaba, Z., *The Rock Inscriptions of Lower Nubia (Czechoslavak Concession)*, Charles University of Prague, Prague, 1974.